

Pearson Edexcel Level 4 Diploma in Technical Textiles and Apparel (QCF)

Specification

Pearson Edexcel Professional Combined Competence
and Knowledge qualification

First teaching October 2013

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Qualification title covered by this specification

This qualification has been accredited to the Qualifications and Credit Framework (QCF) and is eligible for public funding as determined by the Department for Education (DfE) under Section 96 of the Learning and Skills Act 2000.

The qualification title listed above features in the funding lists published annually by the DfE and the regularly updated website www.education.gov.uk/. The QCF Qualification Number (QN) should be used by centres when they wish to seek public funding for their learners. Each unit in a qualification will also have a QCF unit code.

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

The QN for the qualification in this publication is:

Qualification title	Qualification Number (QN)
Pearson Edexcel Level 4 Diploma in Technical Textiles and Apparel (QCF)	600/9501/5

This qualification title will appear on learners' certificates. Learners need to be made aware of this when they are recruited by the centre and registered with Pearson.

Key features of the Pearson Edexcel Level 4 Diploma in Technical Textiles and Apparel (QCF)

This qualification:

- is nationally recognised
- is based on the Creative Skillset National Occupational Standards (NOS). The NOS, assessment requirements/strategy and qualification structure is owned by Creative Skillset.

What is the purpose of this qualification?

The fashion and textiles sector in the UK is thriving and the technical textiles industry is at the centre of breakthrough technological advancements across a range of sectors.

The Technical Textiles pathway is an exciting new offer that serves the needs of today's textiles industry. It has been designed to give apprentices a working knowledge of technical textile fibres, yarns, fabrics and finishes, as well as their application in functions such as antimicrobial, breathability, fire and heat resistance, stain resistance, biodegradability and conductivity.

Product Development and Sourcing is also important to the success of the fashion and textiles sector, especially in the apparel, textiles and technical textiles sub-sectors. This is due to the rapid changes that have occurred in the environment in which fashion and textiles businesses compete.

In the face of low-cost competition, fashion and textiles businesses are increasingly reliant on implementing cost-effective product development initiatives, enabling them to compete in the global market.

This qualification offers an opportunity to forge an alternative route to degree-level provision, ensuring that highly-skilled individuals are capable of allowing the UK's apparel and textile market to achieve its full potential.

Who is this qualification for?

This qualification is for all learners aged 18 and above who are capable of reaching the required standards.

Pearson's policy is that the qualification should:

- be free from any barriers that restrict access and progression
- ensure equality of opportunity for all wishing to access the qualification(s)
- be offered to learners who have been recruited with integrity by the centre.

This qualification is appropriate for new entrants to the fashion and textile sector, as well as existing employees. It is designed to assess occupational competence in the workplace where learners are required to demonstrate skills and knowledge required in the fashion and textiles industry.

What are the benefits of this qualification to the learner and employer?

The sector has recognised the need for vocational progression from the existing modes of delivery to meet industry demand for higher-level, technical programmes within a work-based setting.

This qualification will allow employers to add value to their organisations by bringing in innovative expertise, techniques and technologies. It will provide a stream of motivated employees equipped with the creative and business skills required for the future. It will provide flexible routes into a wide variety of job roles in the industry, and to higher-level training and education.

What are the potential job roles for those working towards this qualification?

Fabric Technologist	Process Engineer
Fibre Technologist	Procurement Manager (Apparel and Textiles Goods)
Senior Technologist	Sales Manager (Apparel and Textiles Goods)
Textile Technical Designer	Logistics Manager (Textile Finished Goods)
Senior Testing Technologist	Technical Manager (Production)
Textile Product Development	Research and Development Manager (Textiles and Apparel Goods)
Technologist	Marketing Manager (Apparel and Textile Goods)
Textile Support Analyst	Quality Manager
Technical Textile Researcher	
Textile Quality Controller	
Technical Manager (Production)	
New Product Development Manager	

What progression opportunities are available to learners who achieve this qualification?

The learner will be able to progress to employment, self-employment, or to more skilled activity within the industry.

Progression from the Pearson Edexcel Level 4 Diploma in Technical Textiles and Apparel (QCF) should be geared towards relevant higher-level programmes of learning. Higher apprentices can progress to higher or professional levels such as Foundation Degrees, Higher National Diplomas/Certificates BA Honours Degrees and related professional courses.

Examples of progression could be in:

- Textile Technology
- Advanced Materials
- Performance Sportswear Design
- Advanced Materials and Performance Clothing
- Fashion Technology
- Materials Engineering
- Advanced Skills for Advanced Materials.

Progression opportunities into higher education, formal and informal, should be explored and supported, as this will help strengthen local partnerships and support progression opportunities through the range of vocational and academic provision. For details on higher education courses in textiles-related subjects, please see the UCAS website: www.ucas.ac.uk

For further information on career progression in the fashion and textiles industries please go to: http://www.creativeskillset.org/fashion_and_textiles/

Further information is available in *Annexe A*.

What is the qualification structure for the Pearson Edexcel Level 4 Diploma in Technical Textiles and Apparel (QCF)?

Individual units can be found in the *Units* section.

This qualification consists of two pathways. Learners must select either Pathway 1: Technical Textiles, or Pathway 2: Product Development and Sourcing.

Learners must achieve a total of 45 credits from their selected pathway.

Pearson Edexcel Level 4 Diploma in Technical Textiles and Apparel (QCF)				
Pathway 1: Technical Textiles				
Learners must achieve the three mandatory units, with the remaining credits chosen from the optional units group.				
Unit reference number	Mandatory units – learners to complete all 21 credits	Credit	Level	Guided learning hours
H/502/6299	Managing Health and Safety and Employment Rights and Responsibilities within the Textiles Industry	7	3	40
Y/504/2676	Portfolio Management of New Products	8	4	40
K/504/2679	Fibres and Technical Textiles	6	4	40
Unit reference number	Optional units – learners to complete a minimum of 24 credits	Credit	Level	Guided learning hours
A/504/2668	Fire and Heat Resistance in Textiles Applications	8	4	40
F/504/2669	Stain Resistance in Textiles Applications	8	4	40
T/504/2670	Ultraviolet Resistance in Textiles Applications	8	4	40
A/504/2671	Fabric Wear and Durability of Textile Products	8	4	40
F/504/2672	Anti-microbial Applications for Textile Products	8	4	40
J/504/2673	Breathability in Textile Products	8	4	40
L/504/2674	Anti-static and Conductive Textiles	8	4	40
R/504/2675	Biodegradable Textiles	8	4	40

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Pathway 2: Product Development and Sourcing

Learners must achieve the four mandatory units, with the remaining credits chosen from the optional units group.

Unit reference number	Mandatory units – learners to complete all 27 credits	Credit	Level	Guided learning hours
H/502/6299	Managing Health and Safety and Employment Rights and Responsibilities within the Textiles Industry	7	3	40
Y/504/2676	Portfolio Management of New Products	8	4	40
D/504/2677	Planning and Managing the Outsourcing Process in Manufacturing	8	4	40
H/504/2678	Outsourcing Costs in Manufacturing	4	4	10
Unit reference number	Optional units – learners to complete a minimum of 18 credits	Credit	Level	Guided learning hours
J/501/8387	Strategic Marketing Planning Skills within the Design and Creative Industries	6	4	40
L/501/8388	Business Planning and Financial Projections in the Design and Creative Industries	8	4	60
R/501/8389	Design Development, Creativity and Business Development	6	4	40
J/501/8390	Leadership and People Management in the Design and Creative Industries	6	4	40
L/501/8391	Intellectual Property Management in the Design and Creative Industries	7	4	50
R/501/8392	Design Project Management for Creative Practitioners	6	4	40
Y/501/8393	Doing Business Globally	7	4	50
D/501/8394	Finance for Designers and Creatives	12	4	90
A/504/2668	Fire and Heat Resistance in Textiles Applications	8	4	40
F/504/2669	Stain Resistance in Textiles Applications	8	4	40
T/504/2670	Ultraviolet Resistance in Textiles Applications	8	4	40
A/504/2671	Fabric Wear and Durability of Textile Products	8	4	40
F/504/2672	Anti-microbial Applications for Textile Products	8	4	40
J/504/2673	Breathability in Textile Products	8	4	40
L/504/2674	Anti-static and Conductive Textiles	8	4	40
R/504/2675	Biodegradable Textiles	8	4	40
K/504/2679	Fibres and Technical Textiles	6	4	20

How is the qualification graded and assessed?

The overall grade for the qualification is a 'pass'. The learner must achieve all the required units within the specified qualification structure.

To pass a unit the learner must:

- achieve **all** the specified learning outcomes
- satisfy **all** the assessment criteria by providing sufficient and valid evidence for each criterion
- show that the evidence is their own.

The qualification is designed to be assessed:

- in the workplace or
- in conditions resembling the workplace, as specified in the assessment requirements/strategy for the sector, or
- as part of a training programme.

Assessment requirements/strategy

The assessment requirements/strategy for this qualification has been included in *Annexe D*. It has been developed by Creative Skillset in partnership with employers, training providers, awarding organisations and the regulatory authorities. The assessment strategy includes details on:

- criteria for defining realistic working environments
- roles and occupational competence of assessors, expert witnesses, internal verifiers and standards verifiers
- quality control of assessment
- evidence requirements.

Evidence of competence may come from:

- **current practice** where evidence is generated from a current job role
- a **programme of development** where evidence comes from assessment opportunities built into a learning/training programme whether at or away from the workplace
- the **Recognition of Prior Learning (RPL)** where a learner can demonstrate that they can meet the assessment criteria within a unit through knowledge, understanding or skills they already possess without undertaking a course of learning. They must submit sufficient, reliable and valid evidence for internal and standards verification purposes. RPL is acceptable for accrediting a unit, several units or a whole qualification
- a **combination** of these.

It is important that the evidence is:

Valid	relevant to the standards for which competence is claimed
Authentic	produced by the learner
Current	sufficiently recent to create confidence that the same skill, understanding or knowledge persist at the time of the claim
Reliable	indicates that the learner can consistently perform at this level
Sufficient	fully meets the requirements of the standards.

Types of evidence (to be read in conjunction with the assessment strategy in *Annexe D*)

To successfully achieve a unit the learner must gather evidence which shows that they have met the required standard in the assessment criteria. Evidence can take a variety of different forms including the examples below. Centres should refer to the assessment strategy for information about which of the following are permissible.

- direct observation of the learner's performance by their assessor (O)
- outcomes from oral or written questioning (Q&A)
- products of the learner's work (P)
- personal statements and/or reflective accounts (RA)
- outcomes from simulation, where permitted by the assessment strategy (S)
- professional discussion (PD)
- assignment, project/case studies (A)
- authentic statements/witness testimony (WT)
- expert witness testimony (EPW)
- evidence of Recognition of Prior Learning (RPL).

The abbreviations may be used for cross-referencing purposes.

Learners can use one piece of evidence to prove their knowledge, skills and understanding across different assessment criteria and/or across different units. It is, therefore, not necessary for learners to have each assessment criterion assessed separately. Learners should be encouraged to reference the assessment criteria to which the evidence relates.

Evidence must be made available to the assessor, internal verifier and Pearson standards verifier. A range of recording documents is available on the Edexcel website: www.edexcel.com. Alternatively, centres may develop their own.

Centre recognition and approval

Centre recognition

Centres that have not previously offered Pearson qualifications need to apply for and be granted centre recognition as part of the process for approval to offer individual qualifications. New centres must complete both a centre recognition approval application and a qualification approval application.

Existing centres will be given 'automatic approval' for a new qualification if they are already approved for a qualification that is being replaced by the new qualification and the conditions for automatic approval are met. Centres already holding Pearson approval are able to gain qualification approval for a different level or different sector via Pearson online.

Approvals agreement

All centres are required to enter into an approvals agreement which is a formal commitment by the head or principal of a centre to meet all the requirements of the specification and any linked codes or regulations. Pearson will act to protect the integrity of the awarding of qualifications, if centres do not comply with the agreement. This could result in the suspension of certification or withdrawal of approval.

Quality assurance

Detailed information on Pearson's quality assurance processes is given in *Annexe B*.

What resources are required?

This qualification is designed to support learners working in the fashion and textiles sector. Physical resources need to support the delivery of the qualification and the assessment of the learning outcomes and must be of industry standard. Centres must meet any specific resource requirements outlined in *Annexe D: Assessment requirements/strategy*. Staff assessing the learner must meet the requirements within the overarching assessment strategy for the sector.

Unit format

Each unit in this specification contains the following sections.

Unit title:					The unit title is accredited on the QCF and this form of words will appear on the learner's Notification of Performance (NOP).
Unit reference number:					This is the unit owner's reference number for the specified unit.
QCF level:					All units and qualifications within the QCF 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 NOS and/or other sector/professional.
Credit value:					All units have a credit value. The minimum credit value is one, and credits can only be awarded in whole numbers. Learners will be awarded credits when they achieve the unit.
Guided learning hours:					A notional measure of the substance of a qualification. It includes an estimate of the time that might be allocated to direct teaching or instruction, together with other structured learning time, such as directed assignments, assessments on the job or supported individual study and practice. It excludes learner-initiated private study.
Unit summary:					This provides a summary of the purpose of the unit.
Knowledge/Competence unit assessment guidance:					The assessment/evidence requirements are determined by the SSC. Learners must provide evidence for each of the requirements stated in this section.
Learning outcomes:	Assessment criteria:	Evidence type:	Portfolio reference:	Date:	
Learning outcomes state exactly what a learner should know, understand or be able to do as a result of completing a unit.	The assessment criteria of a unit specify the standard a learner is expected to meet to demonstrate that a learning outcome, or a set of learning outcomes, has been achieved.	Learners must reference the type of evidence they have and where it is available for quality assurance purposes. The learner can enter the relevant key and a reference. Alternatively, the learner and/or centre can devise their own referencing system.	The learner should use this box to indicate where the evidence can be obtained eg portfolio page number.	The learner should give the date when the evidence has been provided.	
Suggested unit content:					The unit content is determined by the SSC, based on National Occupational Standards. Content has only been provided where available and relevant for learning outcomes.
Mapping to National Occupational Standards (NOS)					Details of the specific National Occupational Standards each unit maps to.

Units

Unit 1: **Managing Health and Safety and Employment Rights and Responsibilities within the Textiles Industry**

Unit reference number: H/502/6299

QCF level: 3

Credit value: 7

Guided learning hours: 40

Unit summary

This unit gives learners an understanding of the legal requirements of employers and employees in terms of health, safety and employment law in the textile sector. This unit will cover the legal aspects of employment in respect of the individual employee and form part of the induction process to the world of work.

Learners will learn how to be responsible for the health, safety and security of themselves and others in the workplace, taking action in the event of any potential hazards and security breaches to make the workplace safe.

Knowledge unit assessment guidance

This unit is predominantly knowledge based. The assessment of knowledge-based units can take place in or outside of the working environment. Where assessment is electronic the assessment decisions are made by the person/organisation that set the answers.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Understand the health and safety requirements for the textile sector	<p>1.1 For a business in their chosen sector, state the health and safety requirements of employers, as required by current law</p> <p>1.2 State the health and safety responsibilities of employees at each level within the business as required by law</p> <p>1.3 Report how the business manages its obligations to meet current health and safety legislation</p>			
2 Be able to carry out a risk assessment within the textile sector	<p>2.1 Carry out a risk assessment</p> <ul style="list-style-type: none"> • using appropriate documentation • identifying and recording hazards • ranking hazards identified • making recommendations to remove or minimise risk <p>2.2 Carry out assessment for COSHH purposes</p> <ul style="list-style-type: none"> • using appropriate documentation • making recommendations to remove or minimise risk 			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Understand the career progression routes available within the textile sector</p>	<p>3.1 Describe</p> <ul style="list-style-type: none"> • the structure and organisation of the business • the main job roles in the business • career paths available 			
<p>4 Know about your statutory rights in employment</p>	<p>4.1 Describe their current statutory rights in relation to:</p> <ul style="list-style-type: none"> • employment law • contracts of employment • sick pay • Working Time Regulations • holiday entitlement • maternal and paternal leave • data protection 			
<p>5 Know about the expectations and relevant procedures in the textile sector</p>	<p>5.1 Describe the standards of acceptable behaviour in the business</p> <p>5.2 Explain the consequences of not meeting that standard</p> <p>5.3 Describe relevant procedures within the business to include:</p> <ul style="list-style-type: none"> • performance management • disciplinary procedures • grievance procedures 			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
6 Know how to obtain further information about employment issues	6.1 Know where to access information and advice concerning employment 6.2 Describe the role of trade unions in the workplace, supporting and advising employees			

Learner name: _____ Date: _____

Learner signature: _____ Date: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____
(if sampled)

Suggested unit content

1 **Understand the health and safety requirements for the textile sector**

Where alarms, emergency exits, escape routes, emergency equipment and assembly points are located

What the alarm sounds like

What hazardous substances are used in the workplace

Methods of making safe or reducing the danger of hazardous substances in the event of an accident

2 **Be able to carry out a risk assessment within the textile sector**

How to handle and store hazardous substances in line with COSHH (Control of Substances Hazardous to Health) Regulations

What the most likely accidents and emergencies in the workplace are and how to respond to them

3 **Understand the career progression routes available within the textile sector**

4 **Know about your statutory rights in employment**

5 **Know about the expectations and relevant procedures in the textile sector**

Who the nominated first aiders are

How to respond to loss of property

Your responsibility for health, safety and security in the workplace

Environmental requirements

6 **Know how to obtain further information about employment issues**

Mapping to National Occupational Standards (NOS)

This unit maps to Creative Skillset's Manufacturing Textile Products NOS (2010):

- HS1 Health, safety and security at work.

Unit 2: Portfolio Management of New Products

Unit reference number:	Y/504/2676
QCF level:	4
Credit value:	8
Guided learning hours:	40

Unit summary

This unit will enable learners to use a variety of techniques to evaluate new product development proposals and make decisions on which projects to undertake. The decisions made, based on critical success factors, will determine the potential success of proposed projects. Learners will use the agreed weightings to evaluate the project scoring and follow the execution of a project from start to finish.

The unit links to job roles which may involve:

- co-ordinating and managing teams involved in proposing new product development projects
- determining which projects should be undertaken and which should not be progressed
- developing assessment categories
- developing weightings to score past and future projects
- calibrating past product successes and failures to check the weightings
- working closely with the marketing team to develop marketing plans
- organising meetings with project managers to discuss scoring
- overseeing teams involved in scoring standardisation
- organising meetings and the relevant paperwork as necessary
- setting targets to complete activities.

Competency unit assessment guidance

This unit is assessed predominantly in the workplace or in conditions resembling the workplace. Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Understand the processes involved in developing the product portfolio</p>	<p>1.1 Explain the strategic objectives of their business in the context of the global marketplace</p> <p>1.2 Explain how the product life-cycle can impact on the decision-making process</p> <p>1.3 Assess the advantages and contribution of new product development to a business in producing a balanced portfolio</p> <p>1.4 Analyse the risks involved in new product development</p> <p>1.5 Explain the advantages and disadvantages of using scoring models to evaluate and assess projects</p> <p>1.6 Explain the stages involved in the project execution process which ensure delivery of the project</p> <p>1.7 Explain the importance of ongoing monitoring and evaluation in the execution of a project</p>			
<p>2 Be able to evaluate project ideas to determine which should be progressed</p>	<p>2.1 Carry out a strategic review of the portfolio and ensure that spending reflects business strategy</p> <p>2.2 Using a range of portfolio evaluation methods and scoring models determine which projects should be undertaken to include:</p> <ul style="list-style-type: none"> • the creation of evaluation criteria and weightings • use of product Critical Success Factors (CSFs) • evaluation of past product performance as success or failure in the marketplace to check the weightings • evaluation of costs against available budget 			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
3 Be able to execute the project	2.3 Work with business management teams to rank and compare projects in the context of the business and the market place 2.4 Carry out a strategic assessment of the proposed portfolio and make recommendations in line with limits of authority and responsibility 2.5 Create accurate records in line with their organisation's policies and procedures to ensure that quantitative and qualitative data can be used in the future to improve the quality of the decision-making process 2.6 Communicate with key business functions to ensure that the process is reflected in the delivery of the business plan			
3.1 Demonstrate that the project execution process has been adopted in a way that ensures quality products are produced on time and in line within budget 3.2 Communicate with key business functions to ensure that the project execution process is understood and reflected in the delivery of the business plan 3.3 Identify the job role or department accountable for monitoring and controlling the execution of the process 3.4 Ensure that each process stage is a discrete identifiable action that allows the management team to make stop/go decisions to build quality into the end product				

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
4 Be able to evaluate the project process	4.1 Conduct post-launch evaluation with relevant members of the business management team to measure performance against the original targets			

Learner name: _____

Date: _____

Learner signature: _____

Date: _____

Assessor signature: _____

Date: _____

Internal verifier signature: _____

Date: _____

(if sampled)

Suggested unit content

1 **Understand the processes involved in developing the product portfolio**

The importance of new product development

Portfolio management methods

Different scoring models (i.e. bubble diagrams)

Critical Success Factors (CSFs)

The importance of correct project management procedures during product development

The impact of attaining the balance between short-term, low-risk projects and long-term, high-risk projects

The different types of innovation, i.e. improved equipment/processes or new/improved raw material

Failure – risks and issues including technical, marketing, cost, customer, legal and financial estimates

Company strategy

Market research

Cost implications of process

Differences between incremental change projects and significant new product development projects

Commercial awareness

2 **Be able to evaluate project ideas to determine which should be progressed**

Critical Success Factors (CSFs) and their priority (i.e. product superiority, marketing quality)

Selection criteria

Company vision and strategy

The company's position within the global market

Financial awareness (costing structures, budgeting etc.)

3 **Be able to execute the project**

The process at each stage and gate

The rationale for using this process

Company strategy

Market research

Cost implications of process

Differences between incremental change projects and significant new product development projects

Reasons for failures

Project budgets

Company goals

Company strategy

Team member limits of responsibility

Financial awareness (costing structures, budgeting etc.)

The importance of cross-functional, dedicated, accountable teams

4 **Be able to evaluate the project process**

How to develop a scoring model

The advantages and disadvantages of using scoring models

Product evaluation skills (Critical Success Factors)

How the project fits into the corporate strategy

Financial awareness (costing structures, budgeting etc.)

The importance of cross-functional, dedicated, accountable teams

Mapping to National Occupational Standards (NOS)

This unit maps to Creative Skillset's Balanced Sourcing and New Product Development NOS (2010):

- BS1 Portfolio Management
- BS2 Calibration of Project Ideas
- BS3 Evaluation and Assessment of Future Projects
- BS4 Follow the Project Evaluation Process.

Unit 3: Fibres and Technical Textiles

Unit reference number: K/504/2679

QCF level: 4

Credit value: 6

Guided learning hours: 20

Unit summary

In this unit, learners are developing and applying their knowledge of the fibres, yarns and materials that are used in technical textile materials or products. It is relevant across all of the technical textile sectors including, but not limited to, Agrotex (Agricultural Textiles), Mobiltex (Automotive and Aerospace Textiles), Buildtex (Construction Textiles), Clothtex (Clothing Textiles), Geotex (Geo-Textiles), Hometex (Domestic Textiles), Indutex (Industrial Textiles), Oekotex/Ecotex (Environmentally Friendly Textiles), Packtex (Packaging Textiles), Protex (Protective Textiles), Sporttex (Sports Textiles) and Medtex (Medical Textiles).

The unit may be relevant to learners whose job role involves the following:

- researching test methods
- preparing for textile material/product testing
- using standard and non-standard test methods to determine the physical and mechanical properties of textile materials and products
- recording and analysis of test results
- validation and presentation of data
- analysis of material properties and performance for application in new product development
- manufacturing yarns, fibres, fabrics and garments for technical textile applications.

Knowledge unit assessment guidance

This unit is predominantly knowledge based. The assessment of knowledge-based units can take place in or outside of the working environment. Where assessment is electronic the assessment decisions are made by the person/organisation that set the answers.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Understand the technical textiles sector	<p>1.1 Explain the fibres used and products produced for each technical textile sector</p> <p>1.2 Analyse the present relative volume and value of each of these sectors within the textile industry and the UK economy as a whole, identifying current trends</p> <p>1.3 Explain the impact of current legislation, EU directives and CE marking on the technical textile industry</p> <p>1.4 Assess future trends in the technical textile industry</p>			
2 Understand the structure and properties of natural and synthetic fibres	<p>2.1 Classify natural and manufactured fibres according to the following:</p> <ul style="list-style-type: none"> • organic and inorganic materials • natural and synthetic polymers • bioabsorbable and biodegradable <p>2.2 Describe the synthesis and molecular structures of polymers used for fibre production</p> <p>2.3 Explain the difference between the thermoset, elastomer and thermoplastic materials in relation to branched, cross-linked and linear polymer structures</p> <p>2.4 Explain the principles of man-made fibre production</p> <p>2.5 Explain the importance of amorphous and crystalline regions of fibres to their mechanical, thermal and functional properties</p> <p>2.6 Describe the morphologies of bi-component fibres</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
3 Understand the importance of the properties of fibre and yarn in relation to their use	3.1 Explain the qualities of: <ul style="list-style-type: none"> • staple fibres and spun yarns • filaments and filament yarns 3.2 Analyse the appropriateness of fibres for applications relevant to specific business need			
4 Understand the range of analytical methods used for fibre identification and assessment for particular applications	4.1 Describe the methods used for thermal characterisation of fibres, to include DSC, TGA 4.2 Describe the optical techniques for studying the morphology and structural features of fibres, yarns and fabrics 4.3 Explain principles of techniques used for identifying fibre molecular structures 4.4 Describe the spectroscopic techniques used to determine functional chemical groups within the bulk and on the surface of fibres			
5 Understand the combined roles of fibre, yarns and fabric structure and properties in relation to the technical textile applications	5.1 Explain the relation between fabric structural parameters and resulting properties 5.2 Evaluate the use of the following structures for specific applications: <ul style="list-style-type: none"> • woven structures • knitted structures • non-woven structure 			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>6 Understand the finishing techniques and their applications</p>	<p>6.1 Explain the fundamental principles of unconventional textile finishing methods</p> <p>6.2 Analyse a chemical finishing technique in terms of:</p> <ul style="list-style-type: none"> • specific end-use requirements • process parameters • environmental issues • cost effectiveness 			

Learner name: _____ Date: _____

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Suggested unit content

1 Understand the technical textiles sector

Definition of technical and industrial textiles

The technical textile sector market, e.g. size, value, products, trends

2 Understand the structure and properties of natural and synthetic fibres

The chemical and physical structure and properties of natural and synthetic fibres, including:

- fibre classification – natural and synthetic
- synthesis and molecular structure of polymers
- the difference between thermoset, elastomer and thermoplastic materials in relation to their chemical structure
- the importance of fibre amorphous and crystalline regions in relation to their properties
- bi-component fibre morphology

The fundamental principles of, and differences between, man made fibre production techniques

3 Understand the importance of the properties of fibre and yarn in relation to their use

The difference between the structures, properties and applications of spun yarns and filament yarns

Yarn stress-strain behaviour, graphical representation and the effect of yarn twist

The relationship between fibre cross-section and crimp on resultant yarn properties

Yarn and fibre properties in relation to potential applications

4 Understand the range of analytical methods used for fibre identification and assessment for particular applications

Methods used for thermal characterisation of fibres, e.g. Differential Scanning Calorimetry (DSC), Thermogravimetric Analysis (TGA)

Microscopic techniques for studying the morphology and structural features of fibres, yarns and fabrics, e.g. optical incl. birefringence, Scanning Electron Microscopy (SEM), Transmission Electron Microscopy (TEM)

Principles of X-ray diffraction and the various techniques used for identifying fibre molecular structures

Spectroscopic techniques used to determine functional chemical groups within the bulk and on the surface of fibres, e.g. Fourier Transform Infrared Spectroscopy (FTIR), Raman, X-ray Photoelectron Spectroscopy (XPS)

The effect of fabric structural parameters on resulting properties and potential applications

5 Understand the combined roles of fibre, yarns and fabric structure and properties in relation to the technical textile applications

The combined roles of fibre, yarns and fabric structure and properties in relation to the technical textile applications, e.g. sportswear, fibre protective garments, body armour, geotextiles, agrotextiles, composite materials, medical textiles, interiors

6 Understand the finishing techniques and their applications

The fundamental principles of unconventional textile finishing methods, special additives and applications, e.g. plasma, laser, UV-radiation, nano-materials, enzymes

Issues of consideration related to finishing methods:

- specific end-use requirements
- process parameters
- environmental issues
- cost effectiveness

The company's quality standards

The company's relevant rules, codes, systems, procedures and guidelines

Health and safety in the workplace

The significance of sustainability issues specific to the textile industry

The importance of relevant product and manufacturing legislation and industry best practice, e.g. EU directives, CE marking, sustainability and recycling

Mapping to National Occupational Standards (NOS)

This unit maps to Creative Skillset's Technical Textiles NOS (July 2012):

- SKS TTX 1 Analyse and assess fibres and fabric structures used in technical textiles.

Unit 4: **Planning and Managing the Outsourcing Process in Manufacturing**

Unit reference number: D/504/2677

QCF level: 4

Credit value: 8

Guided learning hours: 40

Unit summary

This unit will enable learners to understand and analyse the business case for outsourcing. It covers the fundamental issues to be considered when deciding to outsource and tendering manufacturing proposals to a number of vendors. It will deal with the complexities of determining and analysing the costs involved in outsourcing and managing the outsourcing process.

The unit links to job roles which may involve:

- assessing the need for outsourcing production from overseas
- assessing the need to maintain a degree of manufacturing within the UK
- determining reasons for outsourcing
- assessing vendor capabilities
- evaluating the vendor proposals
- determining which costs may be incurred
- creating cost matrices
- negotiating with vendors over costings
- communicating with people in both companies in a variety of departments (technical, finance, sales, marketing, production)
- facilitating meetings and working relationships
- ensuring that documentation is correct and distributed accordingly
- building relationships between locations
- understanding when to outsource and when to produce textile or apparel products using UK manufacturers
- understanding the relationship between poor forecasting and quick response
- communicating with designers.

Competency unit assessment guidance

This unit is assessed predominantly in the workplace or in conditions resembling the workplace. Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Understand the business case for outsourcing</p>	<p>1.1 Define the following terms:</p> <ul style="list-style-type: none"> • balanced sourcing • outsourcing • offshoring • rapid response <p>1.2 Explain the differences between sourcing raw materials, goods and services</p> <p>1.3 Analyse the main drivers and trends which influence outsourcing in a global market place</p> <p>1.4 Analyse the benefits and risks of outsourcing at strategic and operational level</p> <p>1.5 Assess the advantages and disadvantages of outsourcing in order to facilitate the decision on whether to manufacture overseas or in the UK</p> <p>1.6 Explain the relationship between poor forecasting and quick response</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
2 Be able to assess proposals for outsourcing	2.1 Identify products within their organisation's portfolio that will benefit from outsourcing 2.2 Create cost matrices, determining which costs may be incurred 2.3 Assess vendor capabilities for a product or product group 2.4 Formulate contingency plans in the light of unsuitable vendors 2.5 Evaluate the vendor proposals for a product or product group 2.6 Conduct negotiations in relation to costs 2.7 Complete risk analysis, making recommendations to satisfy the business case			
3 Be able to manage the outsourcing process	3.1 Establish the steps required in the outsourcing process 3.2 Communicate appropriately with the design team and all relevant business functions at senior level 3.3 Use the stages and key performance measures to monitor and control the outsourcing process 3.4 Liaise with vendors to ensure required quality, value and delivery plans are met in the right timeframe 3.5 Ensure that documentation is completed in line with current legislation and their organisation's policies and procedures			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	3.6 Integrate with the manufacturing plan and business management process 3.7 Work with overseas partners as appropriate to comply with relevant legislation and the maintenance of a skilled workforce			

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(if sampled)

Suggested unit content

1 Understand the business case for outsourcing

The outsourcing process

The cost justification for balanced sourcing

Definitions and terminology (i.e. balanced sourcing, source, outsource, insource, offshoring etc.)

Difference between sourcing raw materials, goods and services

The main drivers behind outsourcing, i.e.:

- financial benefits
- shorter product cycles
- changes in business environment
- benchmarking and re-engineering improvements

The benefits of retaining some manufacturing in the UK (i.e. how to protect the UK manufacturing base)

The risks of outsourcing, i.e.:

- strategic (loss of control)
- operational (vendor performance)
- results (likelihood of success)
- transactional (termination clauses)
- financial (currency fluctuations)

The request for proposal process

Supplier evaluation criteria

The constraints and advantages of the specification

Business process outsourcing

Balanced sourcing and new product development

Trends in outsourcing

2 Be able to assess proposals for outsourcing

Costing structures

Company strategy

Associated risks

Project goals and objectives

Different vendor characteristics

How to assess vendor technical ability

The advantages and disadvantages of competitive requests and sole sourcing

The required request for proposal content, including:

- specification and quality monitoring
- expectations
- vendor management capabilities
- key personnel resources and training
- pricing
- synergy of systems between supplier and purchaser

Scoring models

The importance of accurate requests for proposal

3 **Be able to manage the outsourcing process**

The outsourcing process in detail

The effect of Critical Success Factors (i.e. product superiority, location, process stability, societal impact, availability of skills etc)

How to set and interpret key performance indicators

Outsourcing associated costs (i.e. direct or indirect costs)

How to use metrics (measureables), i.e.:

- cost improvement
- time to market
- product quality
- customer satisfaction

Importance of cultural awareness

How teams function

The importance of adhering to the stage-by-stage process procedure

The company vision and strategy

The concept of continuous replenishment of items versus one-offs

Strategic factors that might influence decision making

Manufacturing flexibility and response times from production/design teams (quick response manufacturing)

The impact of manufacturing overseas on the design of the product

Maintaining intellectual property rights

The basics of agile new product development

The benefits of balanced sourcing (bottom line impact, cooperation, flexibility)

Mapping to National Occupational Standards (NOS)

This unit maps to Creative Skillset's Balanced Sourcing and New Product Development NOS (March 2010):

- BS5 Fundamentals of outsourcing
- BS6 Outsourcing requests for proposals
- BS7 Outsourcing costs
- BS8 Manage the outsourcing process
- BS9 Undertaking balanced sourcing.

Unit 5: Outsourcing Costs in Manufacturing

Unit reference number:	H/504/2678
QCF level:	4
Credit value:	4
Guided learning hours:	10

Unit summary

This unit will enable learners to deal with the complexities of determining and analysing the costs involved in outsourcing and to understand links with other business functions.

The unit links to job roles which may involve:

- determining which costs may be incurred
- creating cost matrices
- negotiating with vendors over costings.

Knowledge unit assessment guidance

This unit is predominantly knowledge based. The assessment of knowledge-based units can take place in or outside of the working environment. Where assessment is electronic the assessment decisions are made by the person/organisation that set the answers.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Understand the costs involved in outsourcing	<p>1.1 Explain why the following are important when considering cost implications:</p> <ul style="list-style-type: none"> • product life cycle • leadtimes • forecasting • SKU proliferation • letters of credit • currency and fluctuations in exchange rate <p>1.2 Analyse the direct and indirect costs of outsourcing in order to build a cost matrix</p> <p>1.3 Identify assumptions that apply when producing a cost matrix</p>			
2 Understand links with other business functions	<p>2.1 Identify which functions need to be consulted when producing costings for outsourcing</p> <p>2.2 Explain why this consultation is important</p> <p>2.3 Explain the importance of integrating with their business management processes</p>			

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Suggested unit content

1 **Understand the costs involved in outsourcing**

The different types of cost detail
Assumptions that need to be made
Letters of credit

2 **Understand links with other business functions**

Where to seek advice on costings
The different cost characteristics of the sector:

- raw materials (fibres, chemicals etc.)
- labour
- overheads
- freight, including duty and insurance
- cost of quotas
- currency and exchange rates

Mapping to National Occupational Standards (NOS)

This unit maps to Creative Skillset's Balanced Sourcing and New Product Development NOS (March 2010):

- BS7 Outsourcing costs.

Unit 6: Fire and Heat Resistance in Textile Applications

Unit reference number: A/504/2668

QCF level: 4

Credit value: 8

Guided learning hours: 40

Unit summary

In this unit, learners will develop and apply knowledge of the fibres, yarns and materials that are used in technical textile materials or products in relation to fire and heat resistance.

The unit links to job roles which may involve:

- researching test methods
- preparing for textile material/product testing
- using standard and non-standard test methods to determine the physical and mechanical properties of textile materials and products
- recording and analysis of test results
- validation and presentation of data
- analysis of material properties and performance for application in new product development
- manufacturing yarns, fibres, fabrics and garments for technical textile applications.

Competency unit assessment guidance

This unit is assessed in the workplace or in conditions resembling the workplace. Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Understand ignition and combustion processes in relation to textile materials</p>	<p>1.1 Explain the combustion cycle and how it can be inhibited</p> <p>1.2 Explain how the following stages relate to the combustion process:</p> <ul style="list-style-type: none"> • ignition temperature • melt temperature/melting point • heat release/heat of combustion • limiting oxygen index • smoke emission • toxicity of combustion gases • flame spread <p>1.3 Explain the characteristics of polymers and fibres in relation to combustion and heat resistance performance</p> <p>1.4 Explain the standard analytical techniques which could be used to evaluate polymer and fibre thermal characteristics</p> <p>1.5 Explain techniques used to inhibit combustion of textile material</p>			
<p>2 Understand the materials processing technologies for producing fire and heat resistant textile products</p>	<p>2.1 Explain the uses of fire and heat resistant textile products</p> <p>2.2 Explain the methods of production of fire and heat resistant textile products</p> <p>2.3 Explain the current product and manufacturing legislation and industry best practice which impacts on processes to inhibit combustion of textile material</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
3 Be able to carry out standard material combustion testing to meet a given brief relating to the use of combustion/heat resistant treatments of textile products	3.1 Prepare textile materials for combustion/heat resistance testing to meet the brief 3.2 Carry out standard material combustion tests in accordance with recognised standard procedures 3.3 Justify choice of test method/s used 3.4 Record findings in accordance with organisational policies and procedures in line with appropriate quality standards 3.5 Comply with health and safety requirements and procedures			
4 Be able to report findings to meet a given brief relating to the use of combustion/heat resistant treatments of textile products	4.1 Analyse findings from testing to evaluate polymer and fibre thermal characteristics in relation to combustion/heat resistance 4.2 Present recommendations in accordance with organisational policies and procedures in line with appropriate quality standards to meet the brief			

Learner name: _____ Date: _____

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 (if sampled)

Suggested unit content

- 1 Understand ignition and combustion processes in relation to textile materials**
- 2 Understand the materials processing technologies for producing fire and heat-resistant textile products**
- 3 Be able to carry out standard material combustion testing to meet a given brief relating to the use of combustion/heat resistant treatments of textile products**
- 4 Be able to report findings to meet a given brief relating to the use of combustion/heat-resistant treatments of textile products**

Emergency alerts and procedures

What hazardous substances are used in the workplace and methods of making safe or reducing their danger in the event of an accident

What the most likely accidents and emergencies in the workplace are and how to deal with them

Who the nominated first aiders are

How to deal with loss of property

Equipment manufacturers' instructions and operating procedures

Handling and lifting techniques

Environmental requirements

The organisation's rules, codes, guidelines and standards relating to health, safety and security

Responsibilities under the Health and Safety at Work Act and COSHH (Control of Substances Hazardous to Health) Regulation.

Mapping to National Occupational Standards (NOS)

This unit maps to Creative Skillset's Manufacturing Textile Products NOS (July 2012):

- SKS TTX 2 Analyse and assess the fire and heat resistance of materials for technical textile applications

Unit 7: Stain Resistance in Textile Applications

Unit reference number: F/504/2669

QCF level: 4

Credit value: 8

Guided learning hours: 40

Unit summary

In this unit, learners will develop and apply knowledge of preventing textile materials and products from becoming stained during manufacture or use. They will explore the interaction of liquid and solid materials with a textile in the function of stain resistance.

The unit links to job roles which may involve:

- researching fabric production methods that affect stain resistance
- researching surface or intrinsic finishes used to impart stain resistance
- preparing textile materials for stain resistance testing
- applying knowledge in using standard and non-standard test methods to determine the stain resistance properties of a material or product
- recording and analysis of test results
- validation and presentation of data
- analysis of material stain resistance properties and performance for application in new product development.

Knowledge unit assessment guidance

This unit is predominantly knowledge based. The assessment of knowledge-based units can take place in or outside of the working environment. Where assessment is electronic the assessment decisions are made by the person/organisation that set the answers.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Understand how solid and liquid staining occurs in textile materials and products	<p>1.1 Explain how fibre, yarn, fabric, finish and structural parameters influence the stainability of a textile material</p> <p>1.2 Identify the properties of the most common textile staining materials</p> <p>1.3 Explain the process by which a liquid can interact with a textile product to result in staining</p> <p>1.4 Explain the process by which a solid can interact with a textile product resulting in staining</p>			
2 Understand the finishes used to provide stain resistant textile materials and products	<p>2.1 Analyse the advantages and disadvantages of a range of stain resistant finishes</p> <p>2.2 Explain the standard testing techniques which could be used to evaluate stain resistance performance</p> <p>2.3 Explain the current product and manufacturing legislation and industry best practice which impacts on processes relating to stain resistance of textile material and products</p>			
3 Understand the materials processing technologies for producing stain resistant textile products	<p>3.1 Explain the methods of production of stain resistant textiles to include:</p> <ul style="list-style-type: none"> • finishing processes • fibre production <p>3.2 Explain what are the uses of stain resistant textiles</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
4 Be able to carry out standard stain resistance testing to meet a given brief relating to the use of stain resistant treatments of textile products	4.1 Prepare textile materials for stain resistance testing to meet the brief 4.2 Carry out standard stain resistance tests in accordance with recognised standard procedures 4.3 Justify choice of test method/s used 4.4 Record findings in accordance with organisational policies and procedures in line with appropriate quality standards 4.5 Comply with health and safety requirements and procedures			
5 Be able to report findings to meet a given brief relating to the use of stain resistant treatments of textile products	5.1 Analyse findings from testing to evaluate stain resistance 5.2 Present recommendations in accordance with organisational policies and procedures in line with appropriate quality standards to meet the brief			

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 (*if sampled*)

Suggested unit content

1 **Understand how solid and liquid staining occurs in textile materials and products**

The different methods of interaction between liquids and textiles, including:

- hydrophobicity
- hydrophilicity
- oleophobicity
- wicking
- contact angle

The fundamentals of material wettability and capillary wicking

Methods of preventing liquid or solid staining

2 **Understand the finishes used to provide stain-resistant textile materials and products**

The relationship between textile stain performance and the structural parameters of fibres, yarns, fabrics and finishes

Fabric structural design in relation to stain or solid resistance properties

3 **Understand the materials processing technologies for producing stain-resistant textile products**

Materials which commonly stain textiles

Stain resistant finishes:

- types
- properties
- how they interact with materials (surface tension, surface energy)
- advantages and disadvantages

4 **Be able to carry out standard stain-resistance testing to meet a given brief relating to the use of stain-resistant treatments of textile products**

Test methodologies for determining material stain resistance

How to calculate and interpret stain-resistance test results

The mechanism of soil release from textile materials

The company's quality standards

The company's relevant rules, codes, systems, procedures and guidelines

Health and safety in the workplace

5 Be able to report findings to meet a given brief relating to the use of stain-resistant treatments of textile products

The significance of sustainability issues specific to the textile industry

The importance of relevant product and manufacturing legislation and industry best practice, e.g. EU directives, CE marking, sustainability and recycling

Mapping to National Occupational Standards (NOS)

This unit maps to Creative Skillset's Technical Textiles NOS (July 2012):

- SKS TTX 3 Analyse and assess stain resistant textiles to meet performance requirements.

Unit 8: Ultraviolet Resistance in Textile Applications

Unit code:	T/504/2670
QCF level:	4
Credit value:	8
Guided learning hours:	40

Unit summary

In this unit, learners will develop and apply their knowledge of ultraviolet (UV) resistance and how it relates to textile materials/products.

The unit links to job roles which may involve:

- understanding the properties of UV radiation
- preparing textile materials for UV resistance testing
- applying knowledge in using standard and non-standard test methods to determine the UV resistance properties of a material or product
- recording and analysis of test results
- validation and presentation of data
- analysis of material UV resistance properties and performance for application in new product development.

Competency unit assessment guidance

This unit is assessed predominantly in the workplace or in conditions resembling the workplace. Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Understand the sources and behaviour of UV radiation</p>	<p>1.1 Identify sources of UV radiation</p> <p>1.2 Define:</p> <ul style="list-style-type: none"> • UPF rating • SPF rating <p>1.3 Explain factors affecting potency of UV radiation</p> <p>1.4 Explain the interaction of UV rays in the following terms:</p> <ul style="list-style-type: none"> • reflection • refraction • diffraction • scatter • absorption 			
<p>2 Understand the requirements of UV resistance in textile products</p>	<p>2.1 Give examples of textile products where UV resistance is of importance</p> <p>2.2 Explain how UV rays interact with:</p> <ul style="list-style-type: none"> • polymer • fibre • fabric <p>2.3 Explain factors which may positively and negatively affect UV protection of a garment</p> <p>2.4 Explain how to increase UV protection</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	2.5 Analyse how UV resistance in textiles varies under different conditions 2.6 Explain the standard testing techniques which could be used to evaluate UV resistance			
3 Understand the materials processing technologies for producing UV resistant textile products	3.1 Explain the uses of UV resistant textiles 3.2 Explain the methods of production of UV resistant textiles to include: <ul style="list-style-type: none"> • finishing processes • fibre production 3.3 Explain the current product and manufacturing legislation and industry best practice which impact on processes relating to UV resistance of textile products			
4 Be able to measure SPF value of a textile product to meet a given brief	4.1 Prepare textile materials for SPF testing to meet the brief 4.2 Carry out standard SPF tests in accordance with recognised standard procedures 4.3 Record findings in accordance with organisational policies and procedures in line with appropriate quality standards 4.4 Comply with health and safety requirements and procedure			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
5 Be able to measure UPF value of a textile product to meet a given brief	5.1 Prepare textile materials for UPF testing to meet the brief 5.2 Carry out standard UPF tests in accordance with recognised standard procedures 5.3 Record findings in accordance with organisational policies and procedures in line with appropriate quality standards 5.4 Comply with health and safety requirements and procedure			
6 Be able to report findings to meet a given brief relating to UV resistance treatments of textile products	6.1 Analyse findings from testing to evaluate UV resistance 6.2 Present recommendations in accordance with organisational policies and procedures in line with appropriate quality standards to meet the brief			

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(if sampled)

Suggested unit content

1 **Understand the sources and behaviour of UV radiation**

The definition of the Ultraviolet Protection Factor (UPF) rating

The definition of the Sun Protection Factor (SPF) rating

The shape of UV A, B and C wave lengths and their place in the electromagnetic spectrum

Sources of UV radiation and factors affecting potency

The interaction of UV rays in terms of the following:

- reflection
- refraction
- diffraction
- scatter
- absorption

2 **Understand the requirements of UV resistance in textile products**

Regulations specific to UV protective textiles

UV protective product-labelling regulations and guidelines

Factors that positively affect the UV protection performance of a textile material/product

Factors that adversely affect the UV protection performance of a textile material/product

Environmental changes that affect the UV resistance of textile materials or products

3 **Understand the materials-processing technologies for producing UV-resistant textile products**

4 **Be able to measure SPF value of a textile product to meet a given brief**

5 **Be able to measure UPF value of a textile product to meet a given brief**

6 **Be able to report findings to meet a given brief relating to UV resistance treatments of textile products**

Potential physical performance changes caused by UV and light fastness requirements for colour maintenance

The company's quality standards

The company's relevant rules, codes, systems, procedures and guidelines health and safety in the workplace

The significance of sustainability issues specific to the textile industry

The importance of relevant product and manufacturing legislation and industry best practice, e.g. EU directives, CE marking, sustainability and recycling etc.

Mapping to National Occupational Standards (NOS)

This unit maps to Creative Skillset's Technical Textiles NOS (July 2012):

- SKS TTX 4 Analyse and assess the UV resistance of textile materials

Unit 9: Fabric Wear and Durability of Textile Products

Unit reference number: A/504/2671

QCF level: 4

Credit value: 8

Guided learning hours: 40

Unit summary

In this unit, learners will develop and apply their knowledge of the wear performance of textile materials that are used in technical textile materials or products and develop ways to improve their durability.

The unit links to job roles which may involve:

- researching existing and new test methods
- preparing for textile material/product testing
- using standard and non-standard test methods to determine the physical and mechanical properties of textile materials and products
- recording and analysis of test results
- validation and presentation of data
- analysis of material wear properties and performance for application in new product development.

Competency unit assessment guidance

This unit is assessed predominantly in the workplace or in conditions resembling the workplace. Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Understand factors and behaviours which lead to wear of textile products	<p>1.1 Explain the mechanics of fabric deformation</p> <p>1.2 Explain the importance of fibre morphology</p> <p>1.3 Explain the effect of visco-elastic properties of fibres and yarn</p> <p>1.4 Explain the basic theory of moisture sorption in fibres and how differential shrinkage can cause fabric wrinkle</p>			
2 Understand how to increase durability of textile products	<p>2.1 Explain the standard physical and mechanical testing methods which could be used to measure durability of textile products</p> <p>2.2 Describe typical finishing treatments and chemicals used for improving fabric durability</p>			
3 Understand the materials processing technologies for increasing durability of textile products	<p>3.1 Explain the methods of production used to increase durability of textile products to include:</p> <ul style="list-style-type: none"> • finishing processes • fibre production <p>3.2 Explain the current industry best practice which impacts on processes relating to durability of textile products</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
4 Be able to carry out standard tests to measure durability of textile products to meet a given brief relating to the use of treatments to increase durability of textile products	4.1 Prepare textile materials for durability testing to meet the brief 4.2 Carry out standard durability tests in accordance with recognised standard procedures 4.3 Justify choice of test method/s used 4.4 Record findings in accordance with organisational policies and procedures in line with appropriate quality standards 4.5 Comply with health and safety requirements and procedures			
5 Be able to report findings to meet a given brief relating to the use of treatments to increase durability of textile products	5.1 Analyse findings from testing to evaluate durability of textile products 5.2 Present recommendations in accordance with organisational policies and procedures in line with appropriate quality standards to meet the brief			

Learner name: _____ Date: _____

Learner signature: _____ Date: _____

Assessor signature: _____ Date: _____

 Internal verifier signature: _____ Date: _____
 (if sampled)

Suggested unit content

1 **Understand factors and behaviours which lead to wear of textile products**

The fundamentals of fabric mechanics

How friction affects abrasion and pilling and the subsequent durability of the materials

Surface friction in relation to fibres and textile structures

2 **Understand how to increase durability of textile products**

3 **Understand the materials processing technologies for increasing durability of textile products**

Amonton's Laws as applied to textile materials

Static and kinetic/dynamic friction in relation to basic principles of interfacial shear by Bowden and Leben

The effect of the following properties on abrasion, pilling, crease and wrinkle resistance, where appropriate:

- fibre morphology (fineness, length, crimp)
- yarn structure
- fabric structure
- visco-elasticity
- moisture sorption (differential shrinkage)
- thermal behaviour (at moderate temperatures)

Finishing treatments used to enhance fabric durability and methods of application

4 **Be able to carry out standard tests to measure durability of textile products to meet a given brief relating to the use of treatments to increase durability of textile products**

5 **Be able to report findings to meet a given brief relating to the use of treatments to increase durability of textile products**

Standard test methods for determining abrasion, pill, crease and wrinkle resistance of fabrics (i.e. ENISS, ASTM, AATCC etc.)

The company's relevant rules, codes, systems, procedures and guidelines

The company's quality standards

Health and safety in the workplace

The significance of sustainability issues specific to the textile industry

The importance of relevant product and manufacturing legislation and industry best practice, e.g. EU directives, CE marking, sustainability and recycling

Mapping to National Occupational Standards (NOS)

This unit maps to Creative Skillset's Technical Textiles NOS (July 2012):

- SKS TTX 5 Analyse and assess the wear and durability of textile fabrics.

Unit 10: Anti-microbial Applications for Textile Products

Unit reference number: F/504/2672

QCF level: 4

Credit value: 8

Guided learning hours: 40

Unit summary

In this unit, learners will develop and apply their knowledge of anti-microbial fibres and chemical additives for textiles.

The unit links to job roles which may involve:

- understanding the behaviour of micro-organisms
- understanding the interaction between textile materials and anti-microbial agents
- applying knowledge of anti-microbial treatments to different textile materials/products
- applying anti-microbial treatments to textile materials or products
- analysis of material anti-microbial properties and performance for application in new product development.

Knowledge unit assessment guidance

This unit is predominantly knowledge based. The assessment of knowledge-based units can take place in or outside of the working environment. Where assessment is electronic the assessment decisions are made by the person/organisation that set the answers.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Understand the ways in which microorganisms interact with textile materials	<p>1.1 Describe the properties of groups of microorganisms</p> <p>1.2 Explain the mechanisms by which microorganisms may be transferred to textile products</p> <p>1.3 Explain the impact that microorganisms may have on textile products</p> <p>1.4 Explain how the following interactions impact on microorganism presence in textile materials:</p> <ul style="list-style-type: none"> • wetting • wicking • water vapour transfer 			
2 Understand the application of anti-microbial agents for textile products	<p>2.1 Identify a range of anti-microbial agents suitable for textile application</p> <p>2.2 Explain the test procedures for evaluating anti-microbial agents</p> <p>2.3 Explain the testing of the durability of anti-microbial agents in a textile product</p> <p>2.4 Explain the uses of textile products treated with anti-microbial agents</p> <p>2.5 Analyse the implications of anti-microbial treatments for the following at the present and in the future:</p> <ul style="list-style-type: none"> • the environment • healthcare • technology 			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
3 Understand the materials processing technologies used to apply anti-microbial agents to textile products	3.1 Explain the production methods used in applying anti-microbial agents to textiles to include: <ul style="list-style-type: none"> • finishing processes • fibre production 3.2 Explain the current product and manufacturing legislation and industry best practice which impacts on processes relating the application of anti-microbial agents to textile products			
4 Be able to carry out standard tests to assess the anti-microbial properties to meet a given brief relating to the use of anti-microbial treatment of textile products	4.1 Prepare textile materials for anti-microbial testing to meet the brief 4.2 Carry out standard anti-microbial tests in accordance with recognised standard procedures 4.3 Justify choice of test method/s used 4.4 Record findings in accordance with organisational policies and procedures in line with appropriate quality standards 4.5 Comply with health and safety requirements and procedures			
5 Be able to report findings to meet a given brief relating to anti-microbial treatment of textile products	5.1 Analyse findings from testing to evaluate anti-microbial properties 5.2 Present recommendations in accordance with organisational policies and procedures in line with appropriate quality standards to meet the brief			

UNIT 10: ANTI-MICROBIAL APPLICATIONS FOR TEXTILE PRODUCTS

Learner name: _____ Date: _____
Learner signature: _____ Date: _____
Assessor signature: _____ Date: _____
Internal verifier signature: _____ Date: _____
(if sampled)

Suggested unit content

1 **Understand the ways in which microorganisms interact with textile materials**

Definition of a range of microorganisms and their behaviour:

- fungi
- bacteria
- virus
- algae

The interaction between microorganisms and textile materials/products:

- fibre
- yarn
- fabric structure
- finish

Mechanisms by which microbes come into contact with textiles/products

2 **Understand the application of anti-microbial agents for textile products**

Definition of the following terms in relation to anti-microbial agents:

- cidal
- static
- leaching
- non-leaching

Definition of the following terms in relation to microorganisms:

- zone of inhibition
- zone of adaptation

The effect of the following interactions on the presence of microorganisms within textile materials:

- wetting
- wicking
- water vapour transfer

3 **Understand the materials processing technologies used to apply anti-microbial agents to textile products**

The fundamentals of legislation on the regulation of anti-microbial products

Definition of a pathogen

Future implications of anti-microbial applications (environmental, healthcare, technology)

4 Be able to carry out standard tests to assess the anti-microbial properties to meet a given brief relating to the use of anti-microbial treatment of textile products

5 Be able to report findings to meet a given brief relating to anti-microbial treatment of textile products

The effect of laundering and wear on the durability of anti-microbial textile products

The advantages and disadvantages of different anti-microbial agents dependent on the application/material

Relevant medical safety standards in relation to anti-microbial use in healthcare

The company's quality standards

The company's relevant rules, codes, systems, procedures and guidelines

Health and safety in the workplace

The significance of sustainability issues specific to the textile industry

The importance of relevant product and manufacturing legislation and industry best practice, e.g. EU directives, CE marking, sustainability and recycling

Mapping to National Occupational Standards (NOS)

This unit maps to Creative Skillset's Technical Textiles NOS (July 2012):

- SKS TTX 6 Analyse and assess anti-microbial materials for textile applications.

Unit 11: Breathability in Textile Products

Unit reference number: J/504/2673

QCF level: 4

Credit value: 8

Guided learning hours: 40

Unit summary

In this unit, learners will develop and apply their knowledge of breathable textiles.

The unit links to job roles which may involve:

- understanding the principles of breathability in relation to textile products
- applying knowledge of textile characteristics related to breathability
- carrying out tests to determine the breathability performance of textile materials
- analysis of material breathability for application in new product development.

Knowledge unit assessment guidance

This unit is predominantly knowledge based. The assessment of knowledge-based units can take place in or outside of the working environment. Where assessment is electronic the assessment decisions are made by the person/organisation that set the answers.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Understand the function of breathability in textile products	1.1 Define breathability in textiles 1.2 Explain why breathability is important in apparel/skin contact applications 1.3 Analyse the affects of breathability on human performance 1.4 Explain the standard tests for analysing breathability of textile products 1.5 Analyse the advantages and disadvantages of micro-porous/hydrophilic coatings and laminations in relation to functionality and durability 1.6 Analyse how to maximise and minimise air permeability in textile structures			
2 Understand the thermoregulation process and water vapour transfer	2.1 Explain the reasons for and occurrence of water vapour production by the human body 2.2 Explain the mechanism of water vapour transfer 2.3 Explain the pressure temperature relationship of water vapour 2.4 Explain the saturation vapour pressure			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
3 Understand the materials processing technologies to produce breathable textile products	<p>3.1 Explain the methods used in the production of breathable textile products to include:</p> <ul style="list-style-type: none"> • finishing processes • fibre production <p>3.2 Explain the current product and manufacturing legislation and industry best practice which impact on processes relating to the application of breathability to textile products</p>			
4 Be able to carry out standard tests to meet a given brief relating to breathability performance of textile products	<p>4.1 Prepare textile materials for breathability performance testing to meet brief</p> <p>4.2 Carry out standard breathability performance tests in accordance with recognised standard procedures</p> <p>4.3 Justify choice of test method/s used</p> <p>4.4 Record findings in accordance with organisational policies and procedures in line with appropriate quality standards</p> <p>4.5 Comply with health and safety requirements and procedures</p>			
5 Be able to report findings to meet a given brief relating to treatment of textile products to enhance breathability	<p>5.1 Analyse findings from testing to evaluate breathability performance</p> <p>5.2 Present recommendations in accordance with organisational policies and procedures in line with appropriate quality standards to meet the brief</p>			

UNIT 1.1: BREATHABILITY IN TEXTILE PRODUCTS

Learner name: _____ Date: _____

Learner signature: _____ Date: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____
(if sampled)

Suggested unit content

1 Understand the function of breathability in textile products

2 Understand the thermoregulation process and water vapour transfer

Definition of breathability in textiles

The principles of water vapour transfer, including:

- the mechanism of transfer
- the pressure temperature relationship
- saturation vapour pressure

The reason for why water vapour is produced by the human body

The effect on breathability testing of the following:

- equipment type
- methodology
- conditions and their benefits/limitations (e.g. temperature and humidity)

3 Understand the materials processing technologies to produce breathable textile products

The function, advantages and disadvantages of the following with regard to functionality and durability:

- micro-porous membrane or lamination
- hydrophilic membranes or lamination

The principles of waterproof breathable fabrics

Definition of clothing comfort

The effects of breathability on thermal and tactile comfort

The principles of air permeability in textiles:

- the relationship between air permeability and breathability
- the mechanism of air permeation in textile materials

Define thermoregulation in terms of evaporation, convection and conduction

4 Be able to carry out standard tests to meet a given brief relating to breathability performance of textile products

5 Be able to report findings to meet a given brief relating to treatment of textile products to enhance breathability

The company's quality standards

The company's relevant rules, codes, systems, procedures and guidelines

Health and Safety in the workplace

The significance of sustainability issues specific to the textile industry

The importance of relevant product and manufacturing legislation and industry best practice, e.g. EU directives, CE marking, sustainability and recycling

Mapping to National Occupational Standards (NOS)

This unit maps to Creative Skillset's Technical Textiles NOS (July 2012):

- SKS TTX 7 Analyse and develop the breathability of textile materials.

Unit 12: Anti-static and Conductive Textiles

Unit reference number:	L/504/2674
QCF level:	4
Credit value:	8
Guided learning hours:	40

Unit summary

In this unit, learners will develop and apply knowledge of anti-static and conductive textiles.

The unit links to job roles which may involve:

- researching and applying anti-static finishes to textile materials
- understanding the classification of textile materials in terms of their dielectric properties, electrical conductivity, electrical resistance and electrostatic propensity
- utilising standard test methods to determine the conductivity of textile materials
- applying knowledge of electrical characteristics to develop new products.

Knowledge unit assessment guidance

This unit is predominantly knowledge based. The assessment of knowledge-based units can take place in or outside of the working environment. Where assessment is electronic the assessment decisions are made by the person/organisation that set the answers.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Understand static in textile materials and products	1.1 Explain the meaning of dielectric constant 1.2 Explain the dielectric characteristics of polymers, fibres and fabrics to include: <ul style="list-style-type: none"> • the relationship between the dielectric effect and polarisation of electric charges at the molecular scale • the effect of fibre type on the dielectric constant • the effect of yarn and fabric structure • the effect of moisture and temperature 1.3 Explain the importance of the chemical structure of natural and synthetic materials in generation of electrostatic charges on textile substrates			
2 Understand the conductivity of textile materials	2.1 Explain how the following affect conductivity of fibres: <ul style="list-style-type: none"> • chemical structure • moisture • temperature 2.2 Explain surface resistance classification 2.3 Explain the ISO and AATCC test procedures for evaluating the electrical characteristics of textile materials			
3 Understand the materials processing technologies for producing conductive and anti-static textile products	3.1 Explain the methods of production of conductive and anti-static textiles 3.2 Explain the uses of conductive and anti-static textiles			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
4 Be able to carry out standard tests to determine the electrical characteristics of textile products to meet a given brief relating to treatment of textile products to alter electrical characteristics	4.1 Prepare textile materials for testing to determine the electrical characteristics to meet brief 4.2 Carry out standard tests to determine the electrical characteristics in accordance with recognised standard procedures 4.3 Justify choice of test method/s used 4.4 Record findings in accordance with organisational policies and procedures in line with appropriate quality standards 4.5 Comply with health and safety requirements and procedures			
5 Be able to report findings to meet a given brief relating to the treatment of textile products to alter electrical characteristics	5.1 Analyse findings from testing to determine the electrical characteristics 5.2 Present recommendations in accordance with organisational policies and procedures in line with appropriate quality standards to meet the brief			

Learner name: _____ Date: _____

Learner signature: _____ Date: _____

Assessor signature: _____ Date: _____

 Internal verifier signature: _____ Date: _____
 (if sampled)

Suggested unit content

1 Understand static in textile materials and products

Definition of dielectric constant

The material science of dielectric characteristics of polymers, fibres and fabrics, including the:

- relationship between the dielectric effect and polarisation of electric charges at the molecular scale
- effect of fibre type on the dielectric constant
- effect of yarn and fabric structure
- effect of moisture and temperature

Definition of specific resistance

The relationship between specific resistance, fibres, yarns and fabric resistance

2 Understand the conductivity of textile materials

Effect of the following on fibre conductivity:

- chemical structure
- moisture
- temperature

The classification of surface resistance

The fundamentals of the generation and effect of electrostatic charges on textile materials, including:

- the importance of the chemical structure of natural and synthetic materials
- frictional-charge classification

Standard ISO and AATCC test procedures for evaluating the following properties of fibres, yarns and fabrics:

- static electricity levels
- electrical resistance
- electrical conductivity

3 Understand the materials processing technologies for producing conductive and anti-static textile products

Methods of preparing conductive fibres, yarns and fabrics

Methods of applying conductive finishes to fabrics

4 Be able to carry out standard tests to determine the electrical characteristics of textile products to meet a given brief relating to treatment of textile products to alter electrical characteristics

5 Be able to report findings to meet a given brief relating to the treatment of textile products to alter electrical characteristics

The company's quality standards

The company's relevant rules, codes, systems, procedures and guidelines

Health and safety in the workplace

The significance of sustainability issues specific to the textile industry

The importance of relevant product and manufacturing legislation and industry best practice, e.g. EU directives, CE marking, sustainability and recycling

Mapping to National Occupational Standards (NOS)

This unit maps to Creative Skillset's Technical Textiles NOS (July 2012):

- SKS TTX 8 Analyse and assess polymeric and inorganic materials for anti-static and conductive textiles.

Unit 13: Biodegradable Textiles

Unit reference number: R/504/2675

QCF level: 4

Credit value: 8

Guided learning hours: 40

Unit summary

In this unit, learners will develop and apply knowledge of biodegradable textiles.

The unit links to job roles which may involve:

- classifying biodegradable fibres and understanding their characteristics
- keeping up to date with technological advances and new developments
- utilising standard test methods to assess the biodegradability of textile materials
- analysing and interpreting test results
- applying knowledge of textile biodegradability to develop new products.

Competency unit assessment guidance

This unit is assessed predominantly in the workplace or in conditions resembling the workplace. Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion.

Alternatively, centre documentation should be used to record this information.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Understand the principles of natural biodegradability on polymers and fibres for textile applications	1.1 Define biodegradability 1.2 Explain the 3 main categories of biodegradable polymers 1.3 Explain the properties of natural and synthetic biodegradable fibres 1.4 Explain the impact of weathering and ageing on textile polymers and fibres in relation to biodegradability 1.5 Explain the contribution the following may have on biodegradation of textile polymers and fibres: <ul style="list-style-type: none"> • action of enzymes • chemical decomposition • secretion products of living organisms • hydrolytic degradation • photodegradability 1.6 Describe the technical issues which have to be considered in the processing of biodegradable materials during conversion to textiles 1.7 Explain the ISO, ASTM and AATCC test procedures for evaluating the biodegradability of materials			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
2 Understand the commercial availability of biodegradable textile products	2.1 Analyse the availability and use of biodegradable textile products 2.2 Explain the issues involved in life cycle analysis in relation to biodegradable textile products			
3 Be able to carry out standard degradation tests to meet a given brief relating to the use of biodegradable materials to produce textile products	3.1 Prepare textile materials for testing biodegradability of materials exposed to solid waste controlled composting conditions 3.2 Carry out standard testing biodegradability of materials in accordance with recognised standard procedures 3.3 Justify choice of test method/s used 3.4 Record findings in accordance with organisational policies and procedures in line with appropriate quality standards 3.5 Comply with health and safety requirements and procedures			
4 Be able to report findings to meet a given brief relating to the use of biodegradable materials to produce textile products	4.1 Analyse findings from testing biodegradability of materials 4.2 Present recommendations in accordance with organisational policies and procedures in line with appropriate quality standards to meet the brief			

UNIT 13: BIODEGRADABLE TEXTILES

Learner name: _____ Date: _____
Learner signature: _____ Date: _____
Assessor signature: _____ Date: _____
Internal verifier signature: _____ Date: _____
(if sampled)

Suggested unit content

1 **Understand the principles of natural biodegradability on polymers and fibres for textile applications**

Definition of biodegradability of textile materials

The materials science of polymer and fibre degradation by natural processes, including:

- the action of enzymes or chemical decomposition
- the effect of the secretion products of living organisms (i.e. bacteria, fungi etc.)
- hydrolytic degradation
- photodegradability

The relevance of hydrolytic degradation and photodegradability to the composting and recycling properties of textile materials, including:

- mineralisation biomass formation
- aerobic and anaerobic incubations

The characteristics of biodegradable materials, including:

- properties of natural and synthetic biodegradable fibres
- technical steps required to achieve controlled degradation under specified environmental conditions
- effect of weathering factors (i.e. moisture, low/high temperatures, UV radiation)

Types of biodegradable polymers/fibres, including:

- the 3 main categories of biodegradable polymers
- processing conditions for their conversion to fabrics
- technical considerations in converting fibres to fabrics

Standard degradation test methods

The principles of Life Cycle Analysis (LCA) including:

- cost analysis
- material and process sustainability
- mapping on biodegradable textile products and their applications

2 **Understand the commercial availability of biodegradable textile products**

Commercially available biodegradable textile products

Applications and end-uses for biodegradable products

- 3 **Be able to carry out standard degradation tests to meet a given brief relating to the use of biodegradable materials to produce textile products**

- 4 **Be able to report findings to meet a given brief relating to the use of biodegradable materials to produce textile products**

The company's quality standards

The company's relevant rules, codes, systems, procedures and guidelines

Health and safety in the workplace

The significance of sustainability issues specific to the textile industry

The importance of relevant product and manufacturing legislation and industry best practice, e.g. EU directives, CE marking, sustainability and recycling

Mapping to National Occupational Standards (NOS)

This unit maps to Creative Skillset's Technical Textiles NOS (July 2012):

- SKS TTX 9 Analyse and assess the biodegradability of textile polymers and fibres for textile applications.

Unit 14: Strategic Marketing Planning Skills within the Design and Creative Industries

Unit reference number: J/501/8387

QCF level: 4

Credit value: 6

Guided learning hours: 40

Unit summary

This unit aims to give learners an understanding of the markets in the design and creative industries and enables them to gain a clear understanding of the marketing strategies required to implement a successful marketing plan.

Knowledge unit assessment guidance

This unit is predominantly knowledge based. The assessment of knowledge-based units can take place in or outside of the working environment. Where assessment is electronic the assessment decisions are made by the person/organisation that set the answers.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Understand the market in which their business operates	1.1 Analyse the market in which a chosen business operates, benchmarking the competition 1.2 Assess the suitability of known generic strategic and tactical marketing techniques			
2 Be able to construct a strategic marketing plan relevant to their business	2.1 Analyse client needs, perspectives and patterns of buying behaviour 2.2 Determine the strengths and weaknesses of the business relevant to its target market 2.3 Construct an effective marketing strategies for a chosen business which will include analysis of: <ul style="list-style-type: none"> • positioning • sales • strategic pricing options • tactical marketing activities (pricing, products, selling) • routes to market • promotions/delivery of marketing plan • client view and needs • competition 2.4 Allocate resources (including financial) to indicate how marketing relates to other functions within the company including sales and business development			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Understand how to explore potential growth in business through the implementation of effective marketing strategies</p>	<p>3.1 Construct a practical plan of action specific to a chosen sector. Assess how your plan will contribute to:</p> <ul style="list-style-type: none"> • potential growth of business from existing clients • generating new business opportunities from previously unexploited markets • developing new products and services 			

Learner name: _____ Date: _____

Learner signature: _____ Date: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____
(if sampled)

Suggested unit content

1 **Understand the market in which their business operates**

Different sources of information regarding customers, competitors, the economy and relevant technologies, and how to use them effectively

How to measure and review organisational performance

How to analyse organisational culture

How to undertake a strengths, weaknesses, opportunities and threats analysis

How to undertake an analysis of the political, economic, social, technological, legal and environmental factors in the external environment

How to analyse stakeholder interests

How to build future scenarios and assess their implications

Sources of information on trends and developments in the sector, including those at a global level and how to access these

Current and emerging trends and developments in the sector internationally, nationally and locally

Legal, regulatory and ethical requirements in the sector

The organisation's actual and potential customer base

The needs and expectations of the organisation's actual and potential customers and other key stakeholders

Actual and potential competitors, including their activities and relative performance levels

Actual and potential partners, including their activities and relative performance levels

The organisation's structure

The organisation's culture

2 **Be able to construct a strategic marketing plan relevant to their business**

The importance of long- and medium-term planning to the success of an organisation

The principles of strategic management and business planning

The topics to be addressed within a strategic marketing plan

The importance of creativity and innovation in strategic management

The importance of corporate social responsibility and how to reflect this within an organisation's marketing strategy

How to identify potential risks in relation to the achievement of objectives

How to develop strategic objectives

How to delegate responsibility and allocate resources to support a strategic marketing plan

The importance of consulting with colleagues and other stakeholders during the development of the plan and how to do this effectively

How to develop measures and methods for monitoring and evaluating performance against the strategic marketing plan

Legal, regulatory and ethical requirements in the organisation's sector

Market developments in the organisation's sector

The market in which the organisation works

The organisation's actual and potential customer base

The needs and expectations of the organisation's actual and potential customers

The organisation's actual and potential competitors and partners, and the key features of their strategies and plans

New and available market opportunities

The organisation's ability to respond to market opportunities

The organisation's aims towards enhancing corporate social responsibility, in relation to its marketing strategy

Colleagues and other key stakeholders, and their needs and expectations

Processes for consultation within the organisation

Source of information that can aid monitoring and evaluation

3 Understand how to explore potential growth in business through the implementation of effective marketing strategies

The importance of long- and medium-term planning to the success of particular products/services

The principles of strategic management and business planning

The topics to be addressed with a strategic marketing plan for products/services

How to identify potential risks in relation to the achievements of objectives

How to develop strategic objectives, actions, accountabilities and associated budgets and forecasts

How to delegate responsibility and allocate resources to support a marketing plan

How to develop contingency plans to address risks and changing circumstances

The importance of consulting with colleagues and other stakeholders during the development of a plan, and how to do this effectively

How to develop measures and methods for monitoring and evaluating performance against the plan, including key performance indicators

Legal, regulatory and ethical requirements affecting the marketing of products/services in the organisation's sector

Market developments in the organisation's sector

The organisation's marketing strategy relevant to the products/services under consideration

The organisation's actual and potential customer base for the products/services, and their needs and expectations relating to the products/services

The organisation's actual and potential competitors, and the key features of their strategies and plans

The organisation's ability to respond to market opportunities relating to the products/services

Sources of information to assist in monitoring and evaluation of the plan

Colleagues and other key stakeholders, and their needs and expectations

Processes for consultation within the organisation

Mapping to National Occupational Standards (NOS)

This unit maps to the Skills CFA Business Skills NOS Suite: Marketing (April 2010):

- CFAM 1.1.1 Map organisations within their current and future marketing environment
- CFAM 1.3.4 Establish target market segments for products/services and evaluate their potential
- CFAM 2.1.1 Develop an organisation's marketing strategy
- CFAM 3.1.1 Develop marketing strategies and plans for products/services.

Unit 15: **Business Planning and Financial Projections in the Design and Creative Industries**

Unit reference number: L/501/8388

QCF level: 4

Credit value: 8

Guided learning hours: 60

Unit summary

This unit aims to give learners an understanding of the importance of effective business planning and financial forecasting. Learners will analyse the current position of a business, prepare a strategic business plan and determine how to allocate resources effectively.

Competency unit assessment guidance

This unit is assessed predominantly in the workplace or in conditions resembling the workplace. Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Understand the role of effective business planning in guiding the future of the business	1.1 Identify strengths and weakness in business planning models in order to look for and identify poor business planning 1.2 Demonstrate the need for business planning which adapts to market change 1.3 Compare and contrast market and customer led models 1.4 Determine financial projections which reflect company strategy			
2 Understand the current situation of a business to include the financial position	2.1 Establish the current situation of their chosen business through analysis of: <ul style="list-style-type: none"> • sales • analysis of market segmentation • PESTLE analysis • competitive analysis • strategy review • profit and loss and cash flow analysis • segmental analysis • organisation analysis 			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Be able to prepare a strategic business plan</p>	<p>3.1 Produce an effective business plan which is realistic and flexible for their chosen organisation which will include:</p> <ul style="list-style-type: none"> • prioritised strategic, creative and flexible objectives that are consistent with the vision of the organisation • a plan which is adaptable to market changes • analysis of potential risks in relation to the achievement of objectives • identification of responsibility for achieving goals and allocation of resources effectively • setting goals and objectives for the business • measures and methods for monitoring and evaluating the plan 			
<p>4 Be able to determine how to allocate resources in order to meet the company's strategic plan and financial forecasting</p>	<p>4.1 Construct realistic financial plans, to present to departmental or operational heads, incorporating:</p> <ul style="list-style-type: none"> • financial projections, budgeting and sources of funding • tracking of financial documentation to drive medium term internal decision making processes of the business • identification of responsibility for achieving goals and allocation of resources effectively 			

UNIT 15: BUSINESS PLANNING AND FINANCIAL PROJECTIONS IN THE DESIGN AND CREATIVE INDUSTRIES

Learner name: _____
Learner signature: _____
Assessor signature: _____
Internal verifier signature: _____
(if sampled)

Date: _____
Date: _____
Date: _____
Date: _____

Suggested unit content

1 **Understand the role of effective business planning in guiding the future of the business**

Different sources of information on customers and competitors and how to use them effectively

How to measure and review organisational performance

How to analyse organisational culture

How to undertake a strengths, weaknesses, opportunities and threats (SWOT) analysis

How to build future scenarios and assess their implications

2 **Understand the current situation of a business to include the financial position**

How to carry out benchmarking to identify good practice in relation to an organisation's performance and practices

How to undertake an analysis of the political, economic, social, technological, legal and environmental (PESTLE) factors in the external environment

How to analyse stakeholder interests

Sources of information on trends and developments in your sector, including those at a global level and how to access them

Current and emerging trends and developments in your sector internationally, nationally and locally

Legal, regulatory and ethical requirements in your sector

Relevant factors in the international, national and local market in which your organisation works

Your organisation's actual and potential customer base

The needs and expectations of your actual and potential customers and other key stakeholders

Your actual and potential competitors, including their activities and relative performance levels

Your actual and potential partners, including their activities and relative performance levels

Your organisation's structure

Your organisation's culture

Your organisation's performance and the factors that influence this

3 **Be able to prepare a strategic business plan**

- Principles and methods of strategic management and business planning
- The importance of communicating the plan to people and ensuring understanding and how to do so effectively
- How to monitor and review implementation of and performance against the plan
- How to assess and manage risk
- How to further develop and adjust the plan
- How to adjust the way you allocate people and resources to implement the plan
- The importance of identifying ways in which future planning can be improved
- Legal, regulatory and ethical requirements in your sector
- Market developments in your sector at local, national and international levels
- The agreed strategic business plan for your organisation
- The market in which your organisation works
- Customer feedback, financial and other management information
- Your organisation's structure and business processes
- Your organisation's culture
- Colleagues and other key stakeholders, and their needs and expectations
- The processes for communication within your organisation

4 **Be able to determine how to allocate resources in order to meet the company's strategic plan and financial forecasting**

- The differences between management and leadership
- How to develop a compelling vision for an organisation
- The importance of and what is meant by organisational values
- Ways of ensuring that organisational plans support the organisation's purpose, values and vision
- How to select and successfully apply different methods and techniques for communicating with people across an organisation
- Types of challenges and difficulties that may arise, including conflict, diversity and inclusion issues within the organisation, and ways of identifying and overcoming them
- Different theories, models and styles of leadership and how to select and successfully apply these to different people and situations
- The effect that different leadership styles can have on organisations
- How to select and successfully apply different methods and techniques for motivating, rewarding, influencing and persuading people
- How to empower people effectively
- How to get and make use of feedback on your leadership performance

The organisational benefits of and how to create a culture which encourages and recognises creativity and innovation

How to recognise and develop the leadership capability of other people and follow their lead

Leadership styles common in the industry/sector and their strengths and limitations

Legal, regulatory and ethical requirements in the industry/sector

Your own values, motivations and emotions, and the effect these have on your own actions and on other people

Your own strengths and limitations in the leadership role.

The strengths, limitations and potential of people that you lead

Your own role, responsibilities and level of power

The purpose and values of and vision for your organisation

The leadership culture and capability of your organisation

The plans of your organisation

The types of support and advice that people are likely to need and how to respond to these

External stakeholders you may need to communicate and work with

Mapping to National Occupational Standards (NOS)

This unit maps to:

Management Standards Centre (MSC) NOS Suite: Management and Leadership (2008):

- Unit B2 Map the environment in which your organisation operates
- Unit B4 Put the strategic business plan into action
- Unit B7 Provide leadership for your organisation

Small Firms Enterprise and Development Initiative (SFEDI) NOS:

- Unit BD3 Plan where your business is going
- Unit BD4 Carry out a review of the business

If your organisation is a small firm, you should look at Unit A2 Develop your plans for the business (2004), which has been developed by the Small Firms Enterprise and Development Initiative (SFEDI) specifically for small firms and which may be more suitable to your needs.

You can obtain information on the unit from the SFEDI website (www.sfedi.co.uk).

Unit 16: **Design Development, Creativity and Business Development**

Unit reference number: R/501/8389

QCF level: 4

Credit value: 6

Guided learning hours: 40

Unit summary

This unit gives learners the understanding of the importance of design in business and how design and branding impacts on business performance. The learner will consider the concept of how creative thought leads to innovation within the business. Learners will analyse how to understand customer needs through establishing and writing a brief. Business development, selling skills and presenting a pitch will be covered.

Competency unit assessment guidance

This unit is assessed predominantly in the workplace or in conditions resembling the workplace. Learners can enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centre documentation should be used to record this information.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Define techniques used in creating a brand and the importance of branding to business development	<p>1.1 Define and evaluate the tools needed to create a brand to include:</p> <ul style="list-style-type: none"> • analysing competitor brands • development of own business brand personality • investigating business USP 			
2 Be able to develop thought processes to generate creative ideas	<p>2.1 Develop techniques for creative thought through applying:</p> <ul style="list-style-type: none"> • brainstorming • use of empathic tools • learning from others 			
3 Be able to transfer creative thought to initial design idea	<p>3.1 For a specific brief define and implement the processes involved when transferring creative thought to initial design idea to include:</p> <ul style="list-style-type: none"> • identification of the market through the understanding of customer needs in order to clarify brief • researching sales and market information • analysis of gathered data about customer behaviour and competitor activity <p>3.2 Communicate research findings with client to agree best approach to project and produce a proposal</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
4 Define techniques used in the presentation of developed design concepts to the end user (considering and understanding client needs)	4.1 Present a pitch of developed design concepts to (considering and understanding client needs) to an appropriate audience taking into consideration: <ul style="list-style-type: none"> • how the concept meets client need • roles and format of the presentation • appropriate presentation techniques to communicate design options visually and orally 4.2 Produce a written specification for the client			
5 Understand selling and promotional techniques to increase customer/client base	5.1 Apply the following concepts to their own area of expertise: <ul style="list-style-type: none"> • sales negotiation • preparing and presenting proposals and quotations to include terms, specification, quality, price • analysing market opportunities • communicate and record agreements 5.2 Review the impact of the concepts in their own area of expertise			

UNIT 16: DESIGN DEVELOPMENT, CREATIVITY AND BUSINESS DEVELOPMENT

Learner name: _____
Learner signature: _____
Assessor signature: _____
Internal verifier signature: _____
(if sampled)

Date: _____
Date: _____
Date: _____
Date: _____

Suggested unit content

1 **Define techniques used in creating a brand and the importance of branding to business development**

Identify and evaluate information relevant to design briefs:

- method to clarify a client brief and contribute to setting design objectives
- how to evaluate target user needs
- procedure to gather information, structure and conduct interviews
- how to carry out qualitative and quantitative data analysis
- the system to evaluate and verify research findings
- how to prepare and present evaluation reports relevant to a design brief
- information about the purpose and function of client briefs, the limitations and constraints that may effect the design response (e.g. cost, time, market and environmental)
- sources of advice on technical requirements and constraints, legal and regulatory requirements and constraints, the use of information retrieval systems

Explore and select visual sources, materials and techniques relevant to the design context:

- methods to gather information
- how to structure and conduct interviews
- the system to evaluate and verify research findings
- access, collate and record visual source materials
- present research findings to others
- information about the history of the product, competitive products, the context, situation or location in which the product will be used, previous commissions undertaken by the design organisation

Originate ideas to meet project briefs:

- methods to originate ideas
- the procedure to select appropriate design media, including traditional and digital media
- how to present initial design ideas to others
- information about the use of design media, techniques and technology, the use of presentation media, techniques and technology

2 **Be able to develop thought processes to generate creative ideas**

Evaluate design ideas against the brief:

- how to derive evaluation criteria for use within the furniture industry
- how to evaluate design ideas for items of furniture in terms of fitness for purpose and aesthetic qualities

- the procedure to analyse the visual qualities and features of a design
- how to predict the viability of a design for realisation within a furniture production context
- details of the client brief and design objectives
- what quantitative evaluation techniques can be used (e.g. measuring, weighing, performance testing and fitting)
- what qualitative evaluation techniques can be used (e.g. focus groups, surveys and self evaluation)
- current British and European performance standards for items of furniture
- technical constraints on design development and design realisation

Produce design visuals and supporting information:

- how to prepare and present a visual interpretation of a design to a professional standard
- the procedure to prepare and present written material in support of a design
- how to communicate design proposals visually and in writing to non-designers
- how to use design and presentation media, techniques and technology
- what forms of visual interpretation are appropriate to the furniture industry (e.g. roughs, presentation drawings, working drawings, models, samples and multimedia presentations)
- how the design or design product will be used
- how the final design or design product will be realised/produced/installed/replicated

Present design options:

- how to prepare and present written material in support of a design
- procedure to use presentation techniques to communicate design options visually, in writing and orally to non-designers
- how to take part in a design presentation
- how to structure an argument in support of a design option
- the presentation context, roles and responsibilities
- presentation formats used in the furniture industry:
 - for visuals (e.g. graphic artwork, working drawings and printouts)
 - for 3D displays (e.g. models, samples and prototypes)
 - using technology (e.g. audio, visual, digital and multimedia)
- the use of presentation media, techniques and technology
- recording techniques (e.g. minutes, informal notes, follow-up letters, action plans and audio/visual recording techniques) and why it is important to ensure that records are kept

3 Be able to transfer creative thought to initial design idea

Key areas of knowledge and understanding:

- how to:
 - obtain information from the client about their needs through interview and discussion
 - communicate with clients to promote understanding, and build rapport
 - assess needs against delivery requirements
 - present prediction findings for creative research
 - analyse design needs and opportunities
 - evaluate and verify research findings
 - organise and present information to contribute to decision making
 - prepare and present evaluation reports relevant to a design brief
 - communicate the value of the design opportunity
 - agree design objectives
 - record agreements and meetings
 - agree contracts and contract variations
 - research the practical, financial and legal aspects of contracts and contract variations
- the purpose and function of client briefs
- previous negotiations with the client
- client's organisational structure for decision making
- limit of own responsibilities for reaching agreement on behalf of your design organisation
- clients and competitors
- design opportunities and market directions
- source information on constraints of technical requirements, production opportunities, legal and regulatory requirements
- analysis and evaluation techniques (quantitative and qualitative)
- previous commissions undertaken by the design organisation
- the purpose and function of contracts
- source information and advice on contracting arrangements, financial and legal aspects
- basic costings and budgets

Regulations, rules and guidelines:

- the organisation's rules, codes, guidelines and standards
- awareness of relevant national and international legal and regulatory requirements and constraints

- professional ethics and practices
- environmental legislation
- awareness of international product differentiation
- specific safety standards relating to the product

4 Define techniques used in the presentation of developed design concepts to the end user (considering and understanding client needs)

Negotiate sales:

- negotiate and liaise with clients in a manner that promotes goodwill and understanding
- encourage clients to commit themselves to an agreement
- modify proposals during negotiation, within limits of own authority
- communicate and record agreements
- organisational requirements for sales (e.g. price, terms of payment, deadlines, brief/design specification and house style)
- the limit of own personal authority in relation to sales and marketing
- legal and regulatory requirements for proposals

Prepare and present proposals and quotations:

- identify and clarify client requirements
- draft proposals and quotations in line with organisational, legal and regulatory requirements
- handle and store confidential information
- present proposals and quotations persuasively
- the difference between proposals and quotations
- features and benefits of the designs or design services offered
- conditions or constraints which can be written into quotations
- the people who should be consulted in relation to proposals and quotations
- organisational requirements for sales (e.g. price, terms of payment, deadlines, brief/design specification and house style)
- the limit of own personal authority in relation to sales and promotion

Make recommendations for promoting design and design services:

- obtain and analyse market information to support decision making
- select appropriate promotional methods (e.g. public relations, advertising, direct marketing and personal selling)
- the role of promotion in developing the client base for designs and/or design services
- the basis on which promotional decisions are made

- sources of information and advice about:
 - promotional methods
 - market research techniques
 - the market for design and for design services

5 **Understand selling and promotional techniques to increase customer/client base**

Key areas of knowledge and understanding:

- the content and structure of effective proposals, and the points which these need to address
- how to keep the proposal customer focused
- the range of resources and visual aids that can be used to assist in the presentation
- the potential barriers that can exist in a presentation and how to overcome them
- how to use verbal and non-verbal communications effectively in presentations
- how to show customers that you are listening to them and understand their needs and wants
- how to read buyer signals, including verbal and non-verbal cues
- the variety of questioning techniques that can be used to encourage and engage customers in the presentation
- typical procurement practices in your industry
- details of the products/services being offered by your organisation
- your customer's requirements and how these relate to your products/services
- your organisation's procedures for proposal development and submission
- the information underpinning the submission of the proposal including factors relating to pricing strategies and payment arrangements
- sales literature and promotional offers that are complementary to the presentation and will assist in securing the sale
- testimonials from satisfied customers that can be used in your presentation

Further knowledge

Negotiate sales of products and services:

- the importance of effective planning for negotiations and how to do this
- the components to consider in developing effective negotiation strategies and how to do this, including the information requirements regarding customers, and the sources of such information
- factors to consider when assessing the negotiating power and position of customers
- the importance of listening effectively, and of confirming understanding, and techniques for achieving this
- questioning techniques and how to use these effectively
- the difference between features and benefits, and how to use these effectively in negotiating
- the typical range of behaviours displayed by customers, including body language, and how to respond to these constructively during negotiations
- typical queries and objections that can arise during negotiations and how to manage these effectively
- the concept of 'win-win' situations and how to create these in negotiations
- key variables and trade-offs that might be considered during negotiations
- legal, regulatory and ethical requirements impacting upon negotiating in your sector
- your organisation's sales plans and objectives
- your organisation's products/services, and their features and benefits
- your organisation's structure and lines of decision making
- your organisation's target market, key customers and their requirements from your products/services
- competitor sales activities, and key features of their products/services
- your level of responsibility within the negotiation and the limits of your authority

Manage sales relationships with customers:

- how to identify and prioritise effectively customers with whom your organisation should be building long-term and profitable relationships
- how to communicate with key customers effectively in order to develop trust, commitment and cooperation
- how to negotiate effectively with customers to establish a mutually beneficial financial outcome from the relationship
- methods for monitoring and evaluating customer relationships
- principal methods and processes for obtaining customer feedback

- ways of influencing others to respond to customer feedback and improve levels of service
- the importance of maintaining up-to-date records of customer contact details, and of transactions made
- legal, ethical and corporate social responsibility requirements for customer relationships in your sector
- the focus of the sales plans, targets and sales objectives
- the contribution that customer relationships make to the achievement of your organisation's aims
- your organisation's practices relating to monitoring and controlling key customer activities
- methods for managing sales support and customer service improvements
- the limits of your authority in relation to managing a customer relationship

Mapping to National Occupational Standards (NOS)

This unit is mapped to:

Creative and Cultural Skills (CCSkills) NOS Suite: Design:

- Unit 31 Clarify design briefs and research information
- Unit 33 Develop and present suitable design responses
- Unit 41 Develop design briefs
- Unit S Sell and promote designs and design services

Marketing and Sales Standards Setting Body (MSSSB) NOS Suite: Marketing and Sales Standards for Non-specialists:

- Unit S15 Prepare sales proposals and deliver sales presentations
- Unit S17 Negotiate sales of products and services
- Unit 18 Manage sales relationships with customers.

Unit 17: Leadership and People Management in the Design and Creative Industries

Unit reference number: J/501/8390

QCF level: 4

Credit value: 6

Guided learning hours: 40

Unit summary

This unit gives learners an understanding of effective management and leadership skills and how to implement these within a design business. Learners will examine how to select, manage and motivate their teams and build their own leadership skills.

Knowledge unit assessment guidance

This unit is predominantly knowledge based. The assessment of knowledge-based units can take place in or outside of the working environment. Where assessment is electronic the assessment decisions are made by the person/organisation that set the answers.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Understand what it is that makes a effective team leader and/or manager</p>	<p>1.1 Analyse skills and attributes that make an effective team leader</p> <p>1.2 Evaluate their own leadership skills and attributes, identifying areas for personal development if they want to be a good team leader</p>			
<p>2 Understand how to select a team for a specific purpose</p>	<p>2.1 Analyse methods which can be implemented in order to:</p> <ul style="list-style-type: none"> • identify the mix of expertise, knowledge, skills and attitudes required to achieve the team purpose. • identify team members’ expertise, knowledge, skills and attitudes and agree their particular roles within the team • use team selection and development processes to develop any expertise, knowledge, skills and attitudes lacking in the team 			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>3 Understand how to manage and motivate a team</p>	<p>3.1 Analyse methods which can be implemented in order to:</p> <ul style="list-style-type: none"> • enable team building and how to build mutual trust and respect • encourage open communication between team members to share problems with each other to produce creative solutions • review the performance of the team at appropriate points and evaluate how well its purpose is being achieved • celebrate the team and individual successes together and the methods for empowerment of individuals to develop their own ways of working and take their own decisions within agreed boundaries • steer your team successfully through difficulties and challenges 			

Learner name: _____ Date: _____

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Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____
(if sampled)

Suggested unit content

1 **Understand what it is that makes an effective team leader and/or manager**

The importance in giving team members opportunities to approach you with problems affecting their performance

How to encourage team members to approach you with problems affecting their performance

The importance of identifying performance issues and bringing these promptly to the attention of the team members concerned

The importance of discussing problems with team members at a time and place appropriate to the type, seriousness and complexity of the problem

How to gather and check the information you need to identify the problem and its cause

The importance of identifying the problem accurately

The range of alternative courses of action to deal with the problem

The importance of discussing and agreeing with the team member a timely and effective way of dealing with the problem

When to refer the team member to support services or specialists

The importance of keeping a confidential record of your discussions with team members about problems affecting their performance, and how to do so

The importance of ensuring your actions are in line with your organisation's policies for managing people and their performance

Industry/sector requirements for helping team members address problems affecting their performance

The types of problems that your team members may encounter which can affect their performance

Your role, responsibilities and limits of authority when dealing with team members' problems

The range of support services or specialists that exist inside and outside your organisation

Your organisation's policies for managing people and their performance

2 **Understand how to select a team for a specific purpose**

The principles of effective communication and how to apply them

How to maximise communication when managing remote teams using communications technology (including instant messaging, virtual meetings, conference calls and internet/intranet forums for sharing knowledge)

How to identify the diversity of expertise, knowledge, skills and attitudes required to achieve the team purpose

The importance of selecting team members with the required expertise, knowledge and skills and different personalities so they can play complementary roles within the team, and how to do so

The importance of agreeing with team members the behaviours that are likely to help achievement of the team purpose and those that are likely to hinder progress and should be avoided.

How to help team members to understand their unique contribution to the team purpose, the contributions expected of fellow team members and how these complement and support each other

The importance of providing opportunities for team members to get to know each other's strengths and weaknesses and build mutual respect and trust

How to encourage team members to get to know each other's strengths and weaknesses and build mutual respect and trust

The importance of encouraging open communication between team members, and how to do so

How to provide feedback to team members to enhance the performance of fellow team members and the team as a whole

The importance of allowing time for the team to develop through its stages of growth (forming, storming, norming, performing), and how to do so

The importance of celebrating team and individual successes together and commiserating together when things go wrong

Ways of refocusing the team's energy on achieving its purpose

Industry/sector requirements for building and managing teams

The purpose of the team and what has to be achieved

The required mix of expertise, knowledge and skills to achieve the team purpose

3 Understand how to manage and motivate a team

The principles of effective communication and how to apply them

How to help team members understand how the roles of different team members interface, complement and support each other

How to identify and address any issues with organisational structures, systems or procedures that are likely to give rise to conflict

The importance of identifying potential conflicts between team members and taking pre-emptive action to avoid these, and how to do so

The importance of giving team members opportunities to discuss with you serious problems that directly or indirectly affect their work, and how to encourage team members to do so

The importance of taking prompt action to bring up and deal with conflicts when they arise and when the team members concerned are not able to resolve the conflicts themselves

Ways of dealing with conflicts when they arise and what types of action should be taken and when

The importance of acknowledging and showing respect for team members' emotions regarding the conflict and how to seek to manage any negative emotions

How to identify impartially the causes of the conflict, giving all parties opportunities to present the facts and their perceptions about the conflict

The importance of identifying and agreeing with team members how to resolve the conflict, without apportioning blame, and how to do so

When to seek help from colleagues or specialists

The importance of complying with organisational and legal requirements when resolving conflicts

The importance of maintaining complete, accurate and confidential records of conflicts and their outcomes, and how to do so

Industry/sector requirements for managing conflict in your team

The standards of work and behaviour expected of team members

How the roles of different team members interface, complement and support each other

The organisational structures, systems and procedures that are likely to give rise to conflict

The range of specialists inside and outside of the organisation and colleagues.

Organisational and legal requirements for resolving conflicts and maintaining records of conflicts and their outcomes

Further knowledge

Provide leadership for your team

Different ways of communicating effectively with members of a team

How to set objectives which are SMART (specific, measurable, achievable, realistic and time-bound)

How to plan the achievement of team objectives and the importance of involving team members in this process

The importance of and being able to show team members how personal work objectives contribute to achievement of team objectives

That different styles of leadership exist

How to select and successfully apply a limited range of different methods for motivating, supporting and encouraging team members and recognising their achievements

Types of difficulty and challenge that may arise, including conflict within the team, and ways of identifying and overcoming them

The importance of encouraging others to take the lead and ways in which this can be achieved

The benefits of and how to encourage and recognise creativity and innovation within a team

Legal, regulatory and ethical requirements in the industry/sector

The members, purpose, objectives and plans of your team

The personal work objectives of members of your team

The types of support and advice that team members are likely to need and how to respond to them

Standards of performance for the work of your team

Develop productive working relationships with colleagues

The benefits of developing productive working relationships with colleagues

Principles of effective communication and how to apply them to communicate effectively with colleagues

How to identify disagreements with colleagues and the techniques for sorting them out

How to identify conflicts of interest with colleagues and the measures that can be used to manage or remove them

How to take account of diversity issues when developing working relationships with colleagues

The importance of exchanging information and resources with colleagues

How to get and make use of feedback on your performance from colleagues

How to provide colleagues with useful feedback on their performance

Regulations and codes of practice that apply in the industry or sector

Standards of behaviour and performance in the industry or sector

Working culture of the industry or sector

Current and future work being carried out

Colleagues who are relevant to the work being carried out, their work roles and responsibilities

Processes within the organisation for making decisions

Line management responsibilities and relationships within the organisation

The organisation's values and culture

Power, influence and politics within the organisation

Standards of behaviour and performance expected in the organisation

Information and resources that different colleagues might need

Agreements with colleagues

Recruit, select and keep colleagues

Why it is important to identify and understand why colleagues are leaving and how to do so constructively and sensitively

The types of reason colleagues might give for leaving

How to measure staff turnover

The causes and effects of high and low staff turnover

Measures which can be undertaken to address staff turnover problems

How to review the workload in your area in order to identify shortfalls in the number of colleagues and/or the pool of skills, knowledge, understanding and experience

Different options for addressing identified shortfalls and their associated advantages and disadvantages.

What job descriptions and person specifications should cover and why it is important to consult with others in producing or updating them

Different stages in the recruitment and selection process and why it is important to consult with others on the stages, recruitment and selection methods to be used, associated timings and who is going to be involved

Different recruitment and selection methods and their associated advantages and disadvantages

Why it is important to give fair, clear and accurate information on vacancies to potential applicants

How to judge whether applicants meet the stated requirements of the vacancy

Sources of specialist expertise in relation to recruitment, selection and retention

How to take account of equality and diversity issues, including legislation and any relevant codes of practice, when recruiting and selecting people and keeping colleagues

How to review the effectiveness of recruitment and selection in your area

Turnover rates within similar organisation in the industry/sector

Recruitment, selection and retention issues and specific initiatives and arrangements within the industry/sector

Working culture and practices of the industry/sector

Current people resources available to your area, including skills, knowledge, understanding and experience of colleagues

Work requirements in your area

Agreed operational plans and changes in your area

The staff turnover rate in your area

Job descriptions and person specifications for confirmed vacancies

Local employment market conditions

The organisation's structure, values and culture

Employment policies and practices within the organisation – including recruitment, selection, induction, development, promotion, retention, redundancy, dismissal, pay and other terms and conditions

Sources of specialist expertise in relation to recruitment, selection and retention used by your organisation

Mapping to National Occupational Standards (NOS)

This unit is mapped to:

Management Standards Centre (MSC) NOS Suite: Management and Leadership (July 2007):

- Unit D8 Help team members address problems affecting their performance
- Unit D9 Build and manage teams
- Unit D10 Reduce and manage conflict in your team

(October 2004):

- Unit B5 Provide leadership for your team
- Unit D1 Develop productive working relationships with colleagues
- Unit D3 Recruit, select and keep colleagues.

Unit 18: Intellectual Property Management in the Design and Creative Industries

Unit reference number: L/501/8391

QCF level: 4

Credit value: 7

Guided learning hours: 50

Unit summary

This unit aims to give learners an understanding of the importance of intellectual property management within the field of design. Learners will gain knowledge and understanding of the legalities attached to intellectual property law and how to implement these within their business.

Knowledge unit assessment guidance

This unit is predominantly knowledge based. The assessment of knowledge-based units can take place in or outside of the working environment. Where assessment is electronic the assessment decisions are made by the person/organisation that set the answers.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Understand the legal issues in relation to intellectual property rights and their business	<p>1.1 Analyse the key aspects of UK and international intellectual property law</p> <p>1.2 Determine where to go for information about protecting intellectual property rights in specific jurisdictions inside and outside the UK</p>			
2 Know how to manage the intellectual property rights in their designs	<p>2.1 Identify the different types of intellectual property rights and how they can be protected:</p> <ul style="list-style-type: none"> • copyright • design right • registered designs <p>2.2 Determine when and how to assert or enforce their (or their organisation's) intellectual property rights</p> <p>2.3 Draw up contract(s) concerning intellectual property rights with their clients</p> <p>2.4 Determine what can be protected and how it is protected:</p> <ul style="list-style-type: none"> • websites • images • text • designs 			
3 Understand the revenue opportunities and risks associated with intellectual property rights	<p>3.1 Explain the revenue opportunities and risks associated with intellectual property rights</p>			

Learner name: _____
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Internal verifier signature: _____
(if sampled)

Date: _____
Date: _____
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Date: _____

Suggested unit content

1 **Understand the legal issues in relation to intellectual property rights and their business**

Different types of intellectual property rights and how they can be protected

When and how to assert your (or your organisation's) intellectual property rights

The key aspects of UK and international intellectual property law

Where to go for information about protecting intellectual property rights in specific jurisdictions outside the UK

2 **Know how to manage the intellectual property rights in their designs**

Industry-standard, off-the-shelf licenses

When permission is needed to use or exploit material created by others

The limits of what you may legally do with material created by others before permission is needed

How to identify and contact the owner of any intellectual property rights in material you wish to use

3 **Understand the revenue opportunities and risks associated with intellectual property rights**

Why it is important to ensure that all aspects of copyright, distribution rights, use of patents, trademarks, or other intellectual property rights, have been resolved before production commences

Further knowledge

Key differences between UK intellectual property law and that of other countries or regions

Specialist resources and sources of expertise to help you in asserting your intellectual property rights

The options available to you to counter or remedy breaches of your intellectual property rights

Sources of reliable market information for calculating the value of intellectual property rights in material you wish to use or material you wish to license to others

The different components of a single product that could individually have associated rights

Ongoing developments in the field of digital rights management

Mapping to National Occupational Standards (NOS)

This unit maps to Creative Skillset's Interactive Media and Computer Games NOS (May 2005):

- Unit IM11 Manage Intellectual Property Rights.

Unit 19: Design Project Management for Creative Practitioners

Unit reference number: R/501/8392

QCF level: 4

Credit value: 6

Guided learning hours: 40

Unit summary

This unit aims to give learners the skills to enable them to manage a Design project. Learners will explore the importance of timelines, allocation of resources, managing staff and project objectives.

Knowledge unit assessment guidance

This unit is predominantly knowledge based. The assessment of knowledge-based units can take place in or outside of the working environment. Where assessment is electronic the assessment decisions are made by the person/organisation that set the answers.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Understand the importance of managing a project to timelines	<p>1.1 Produce a schedule with clear and realistic timescales to meet project objectives to enable the project to be delivered on time</p> <p>1.2 Explore potential risks to the project and analyse methods of overcoming unforeseen difficulties</p>			
2 Know how to allocate internal resources correctly to achieve project goals	<p>2.1 Analyse the importance of meeting the following:</p> <ul style="list-style-type: none"> • the full cost of the project • timescales required • resources required • individual tasks within the project • milestones and deliverables to be met • agreed quality standards • project keeping within budget <p>2.2 Evaluate the importance of effective negotiating and liaison with clients</p> <p>2.3 Determine and agree the individual roles of team members to set realistic goals for individuals and the team as a whole</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
3 Understand the importance of managing internal and external project objectives	<p>3.1 Explore the risks to project objectives through poor communication between project team, managers and customers</p> <p>3.2 Analyse monitoring processes which need to be implemented in order to meet design objectives</p>			
4 Explore the use of computer software programmes and other support mechanisms as a tool for successful project management	4.1 Determine which software programmes are available for project management and evaluate the strengths and weaknesses of these			

Learner name: _____ Date: _____

Learner signature: _____ Date: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____
(if sampled)

Suggested unit content

1 **Understand the importance of managing a project to timelines**

The roles and responsibilities of yourself and others under the Health and Safety at Work etc Act 1974

How to identify the project scope to determine the need for a full project plan and management approval

How to develop specific, measurable, realistic project objectives and deliverables, allowing progress to be monitored and measured

The tools and techniques available for project planning and monitoring

How to break the project down into individual deliverable tasks

2 **Know how to allocate internal resources correctly to achieve project goals**

How to communicate effectively, listen and question, provide feedback, support and coach others

How to form and develop the project team required to meet the identified objectives

How to allocate specific tasks and responsibilities to the project team members according to individual skills and abilities

How to determine the specialist help you may require in the project, and how it can be obtained

How to conduct a project meeting

3 **Understand the importance of managing internal and external project objectives**

How to present information effectively to management, peers, team members and customers

How to solve problems and overcome barriers/difficulties encountered during the life of the project

Who to liaise with and who to obtain relevant and specific information from to support and assist you in running the project

How to monitor progress of the project in terms of delivery on time, to budget, with agreed levels of quality

How to report project closure, completion and final status to management, teams and customers

How to agree limits of your own authority within the scope of the project and how to identify, outside of your authority area, whom you should report to in the event of encountering problems that you cannot resolve

4 Explore the use of computer software programmes and other support mechanisms as a tool for successful project management

How to identify strengths and weaknesses of design service provided on current projects

How to identify improvements to working practices

How to identify personal development needs

How to conduct interviews to clarify perceptions and analyse results

Evaluation techniques (quantitative and qualitative)

Training and development opportunities

Mapping to National Occupational Standards (NOS)

This unit is mapped to:

SEMTA NOS Suite: Business Improvement (March 2007)

- Unit 35 Carrying out project management activities

Creative and Cultural Skills NOS Suite: Design (April 2008)

- Unit 3M Plan and Manage Design Work.

Unit 20: Doing Business Globally**Unit reference number:** Y/501/8393**QCF level:** 4**Credit value:** 7**Guided learning hours:** 50**Unit summary**

This unit aims to give learners the understanding of the implications of entering a global market. Learners will explore branding, product development for specific markets.

Knowledge unit assessment guidance

This unit is predominantly knowledge based. The assessment of knowledge-based units can take place in or outside of the working environment. Where assessment is electronic the assessment decisions are made by the person/organisation that set the answers.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Understand factors within a company which affect the building of overseas markets	<p>1.1 Analyse the impact of the following on entering a global market:</p> <ul style="list-style-type: none"> • company branding • website design and functionality in a new market • product design for a specific market 			
2 Understand logistics for taking designs, brands and products to Global markets	<p>2.1 Evaluate methods of breaking in to global markets, through:</p> <ul style="list-style-type: none"> • consultation with relevant trade, and government support agencies • the understanding of import/export procedures/law/financial costs • the use of agents 			
3 Understand how cultural differences can influence design ideas for different countries	<p>3.1 Analyse the cultural differences in potential markets and consider how this could affect product development</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Recognise techniques for communication in different cultures and develop cultural awareness</p>	<p>4.1 Evaluate the important differences in communicating with a range of cultures including:</p> <ul style="list-style-type: none"> • language non-verbal and verbal • translation • dress • social etiquette • managing time 			

Learner name: _____ Date: _____

Learner signature: _____ Date: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____
(if sampled)

Suggested unit content

1 **Understand factors within a company which affect the building of overseas markets**

The importance of understanding trade systems operating in the markets being considered, including any tariffs levied, quotas, exchange controls and non-tariff trade barriers

The factors to consider when understanding the economy of the market(s) being considered, including the industry structure and income distribution of the potential customers

The factors to be considered when assessing the political-legal environment of the market(s) being considered, including attitudes towards buying relevant products/services from overseas

Sources of information regarding trends and developments within different markets for your industry/sector

2 **Understand logistics for taking designs, brands and products to Global Markets**

Different ways of entering markets, and their implications for an organisation on commitment and risk, as well as the potential for control and profitability, including exporting, joint ventures and direct investment

Ways to establish international sales leads including the use of agents, partnerships, trade fairs, exhibitions, conferences and published business opportunities

The marketing components to be considered, including the products/services, their pricing, promotion, packaging and distribution, and the factors to consider when deciding these for different markets

Legal, regulatory and ethical requirements affecting the marketing of products/services to the target markets, and their impact for your organisation's social/corporate responsibility

3 **Understand how cultural differences can influence design ideas for different countries**

How the culture and people's behaviour within particular markets can affect customer's actions in the marketplace

The target market's economic environment, trade systems and political-legal environment relevant to the products/services to be marketed

Your organisation's relevant products/services

Your organisation's culture and capacity to develop international markets

4 **Recognise techniques for communication in different cultures and develop cultural awareness**

The cultural characteristics of the customers within the target market

The indicators of market potential to be considered, including demographics, geographic characteristics, economic, technological and socio-cultural factors

Further knowledge

Assessing marketing opportunities within international and/or diverse markets

General knowledge and understanding:

- the importance of understanding trade systems operating in the markets being considered, including any tariffs levied, quotas, exchange controls and non-tariff trade barriers, and how to do this
- the factors to consider when understanding the economy of the market(s) being considered, including the industry structure and income distribution of the potential customers
- the factors to be considered when assessing the political-legal environment of the market(s) being considered, including attitudes towards buying products/services from the organisation, government/political stability and any monetary regulations
- how a market's industrial structure can affect the needs for products/services, income levels and employment levels
- how the culture and people's behaviour within particular markets can affect customer's actions in the marketplace

Industry/sector specific knowledge and understanding:

- sources of information regarding trends and developments within different markets associated within the industry/sector
- current and emerging trends and developments in the industry/sector
- factors affecting customer decision making within the industry
- legal, regulatory and ethical requirements impacting upon the organisation's products/services within those international and/or diverse markets under consideration

Context specific knowledge and understanding:

- the organisation's range of products/services being considered for international and/or diverse markets
- the organisation's culture and ability to respond to new challenges

Establishing the business case and marketing plan for distributing products/services to international and/or diverse markets

General knowledge and understanding:

- the indicators of market potential to be considered, including demographics, geographic characteristics, economic, technological and socio-cultural factors
- different ways of entering markets, and their implications for an organisation on commitment and risk, as well as the potential for control and profitability, including exporting, joint ventures and direct investment
- the topics to be covered within a marketing plan
- the components of the marketing mix, including the products/services, pricing, promotions, packaging and distribution, and the factors to consider when deciding the marketing mix for different markets
- principal organisational structures for marketing to international and/or diverse markets, including export departments/international divisions, and their relative merits

Industry/sector specific knowledge and understanding:

- sources of information regarding trends and developments within different markets for the industry/sector
- legal, regulatory and ethical requirements affecting the marketing of products/services to the target markets

Context specific knowledge and understanding:

- the target market's economic environment, trade systems and political-legal environment relevant to the products/services to be marketed
- the cultural characteristics of the customers within the target market
- the organisation's relevant products/services
- the organisation's culture and capacity to develop international and/or diverse markets

Selling products or services in international markets

General knowledge and understanding:

- the benefits of trading in international markets
- ways to establish international sales leads including the use of agents, partnerships, trade fairs, exhibitions, conferences and published business opportunities
- sources of information about international markets and the type and quantity of information that your organisation needs
- cultural differences between your own country and other countries
- the different meanings of verbal and non-verbal communications in foreign countries
- cross-selling and up-selling and how to maximise opportunities to grow your business abroad

- face-to-face and telephone sales techniques and how to use them in international markets
- the difference between good and bad customers internationally
- ways to overcome objections and close sales

Sector/industry specific knowledge and understanding:

- government regulations and tariffs relating to your sector/industry in other countries
- legal, ethical, social and cultural issues relating to trading internationally
- international business support mechanisms
- competitor activities abroad

Context specific knowledge and understanding:

- sales strategy and plans
- policies on selling in international markets
- policies on international travel
- sales-related features of international markets
- any agents or contacts in the country to be visited
- historical information on previous trading in selected countries
- pricing, distribution and promotional arrangements for selling products and services overseas
- who to go to for support relating to international customers
- your level of authority and autonomy in your area of responsibility

Mapping to National Occupational Standards (NOS)

This unit is mapped to:

Marketing and Sales Standards Setting Body (MSSSB) NOS Suite: Marketing and Sales Standards for Non-specialists (November 2007):

- Unit 11 Determine opportunities for international sales.

Other units offering greater depth regarding this area are

MSSSB NOS Suite: Marketing (April 2010):

- Unit 6.2.1 Assess marketing opportunities within international and/or diverse markets
- Unit 6.2.2. Establish the business case and marketing plan for distributing products/services to international and/or diverse markets

MSSSB NOS Suite: Sales (April 2010):

- Unit 7.4 Sell products or services in international markets.

Unit 21: Finance for Designers and Creatives

Unit reference number:	D/501/8394
QCF level:	4
Credit value:	12
Guided learning hours:	90

Unit summary

This unit aims to give learners an understanding of the basics of management accounting within a design business. Learners will understand the importance of analysing financial data in order to improve the management of their business.

Knowledge unit assessment guidance

This unit is predominantly knowledge based. The assessment of knowledge-based units can take place in or outside of the working environment. Where assessment is electronic the assessment decisions are made by the person/organisation that set the answers.

For further information, please refer to *Annexe D* for Creative Skillset's assessment requirements.

Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Understand financial statements	<p>1.1 Analyse and interpret prepared financial statements which include:</p> <ul style="list-style-type: none"> • profit and loss statements • balance sheet • cash flow spreadsheets 			
2 Understand the profitability of products and services within the business	<p>2.1 Assess which business elements are profitable and worthy of development by considering the following:</p> <ul style="list-style-type: none"> • allocation of budgets • establishing pricing • segmental analysis • break even analysis • return on investment (ROI) • risk analysis 			
3 Understand how to improve management systems through implementation of financial data	<p>3.1 Identify, evaluate and construct systems to implement the following:</p> <ul style="list-style-type: none"> • setting price • ensure profitability • track cash flow • allocate budgets 			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
4 Understand the techniques for managing financial systems effectively	4.1 Determine and identify techniques in order to: <ul style="list-style-type: none"> • calculate pricing • allocate time • collect debt • negotiate discounts 			
5 Review the effectiveness of financial management systems in order to make successful business decisions	5.1 Integrate techniques into overall business to: <ul style="list-style-type: none"> • assess financial risks • increase profitability • apply theories and implement within your business 			

Learner name: _____ Date: _____

Learner signature: _____ Date: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____
(if sampled)

Suggested unit content

1 **Understand financial statements**

The purposes of budgetary systems

The budget and specific parts of the budget

Company policy regarding purchase orders, petty cash, per diems and cash floats

How information about income and expenditure should be recorded and stored

How to select and use appropriate computer software

How and when to inform people about variations from budget

Why it is important to monitor actual expenditure against agreed expenditure

What forms of financial report are needed, and how to assemble and present them

How to summarise, record and communicate financial decisions

2 **Understand the profitability of products and services within the business**

The importance of agreeing financial responsibilities, including the limits of your authority, for your area with those you report to

Where to get and how to evaluate the available financial information to be able to prepare a realistic master budget for your area

The importance of taking account of the objectives and associated plans of your area in developing and operating the master budget

How to identify opportunities and delegate responsibility for budgets

The importance of consulting with colleagues in identifying priorities, potential problems and risks and generally preparing the budget for your area

How to discuss, negotiate and confirm budgets with colleagues in your area and with people who control the finance and the key factors that should be covered

3 **Understand how to improve management systems through implementation of financial data**

How to establish systems to monitor and evaluate performance against budgets

The importance of contingency plans and the type of contingencies that may occur

The main causes of variances and how to identify them

What different types of corrective action could be taken to address identified variances

The importance of agreeing revisions to the budget and communicating the changes

4 Understand the techniques for managing financial systems effectively

The importance of providing regular information on the financial performance of your area to relevant people and what they might want to know

Types of fraudulent activities and how to identify them

How to encourage colleagues to think about ways of reducing expenditure and increasing income

5 Review the effectiveness of financial management systems in order to make successful business decisions

How to review the financial performance of your area against the stated objectives

Factors, processes and trends that are likely to affect financial management in your industry/sector

Legal, regulatory and ethical requirements in the industry/sector

Further knowledge

General knowledge and understanding:

- the scope and nature of your area of responsibility including the vision, objectives and operational plans
- your financial responsibilities, including the limits of your authority
- the people you report to in your organisation
- financial information available in your organisation
- activities for which budgets have been delegated
- the budgeting period(s) used in your organisation
- organisational guidelines and procedures for the preparation and approval of budgets and for monitoring and reporting of performance against budgets and revising budgets
- the agreed master budget for your area, including delegated budgets
- systems established for managing and evaluating performance against budgets
- contingency plans put in place
- what to do and who to contact if you suspect fraud has been committed
- who needs information on the financial performance of your area, what information they need, when they need it and in what format

Investigating arrears and recovering debts:

- the records that you need to maintain
- your organisation's requirements for dealing with arrears and the recovery of debt
- your limits of your authority for dealing with arrears
- the procedures for referring arrears which are outside your authority.

- the terms and conditions of the accounts offered by your organisation
- the sources of problems customers may have in maintaining agreed payments
- how to investigate the potential impact there may be from problems in customer repayments
- how to investigate the sources of problems with customers sensitively
- the implications of not inviting customers to discuss their problems with accounts
- solutions that are available for the payment of arrears
- the purpose of seeking solutions for the payment of arrears which are agreeable to both your customer and your organisation
- the people who need to be informed of revised payment agreements
- your organisation's requirements relating to the application of codes, laws and regulatory requirements, as they impact on your activities

Mapping to National Occupational Standards (NOS)

This unit is mapped to Financial Services Skills Council (FSSC) NOS Suite: Leadership and Management (October 2007):

- Unit PSA43 Manage finance in your area of responsibility

FSSC NOS Suite: Lending and Credit (September 2008):

- Unit LC10 Investigate arrears and recover debts

CCSkills NOS Suite: Community Arts (March 2008):

- Unit CCS2 Assist with daily financial issues within your organisation.

Further information

For further information about the qualification featured in this specification, or other Pearson qualifications, please call Customer Services on 0844 576 0045 (calls may be monitored for quality and training purposes) or visit our website (www.edexcel.com).

Useful publications

Related information and publications include:

- *Edexcel NVQs, SVQs and Competence-based Qualifications Delivery Requirements and Quality Assurance Guidance* published annually
- *Centre Handbook for Edexcel QCF NVQs and Competence-based Qualifications* published annually
- Functional Skills publications – specifications, tutor support materials and question papers
- *Regulatory Arrangements for the Qualification and Credit Framework* (published by Ofqual, August 2008)
- the current Pearson publications catalogue and update catalogue.

Edexcel publications concerning the Quality Assurance System and the internal and standards verification of vocationally-related programmes can be found on our website, www.edexcel.com.

NB: Some 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

To obtain the National Occupational Standards for the qualification in this specification, please visit: www.ukstandards.co.uk

Professional body contact details

Creative Skillset
Focus Point
21 Caledonian Road
London
N1 9GB

Telephone: 020 7713 9800
Fax: 020 7713 9801
E-mail: info@creativeskillset.org
Website: www.creativeskillset.org

Professional development and training

Pearson supports UK and international customers with training related to Pearson NVQ and 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 Functional Skills into your programme
- building 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 our Customer Services team to discuss your training needs.

The training we provide:

- is active
- is designed to be supportive and thought provoking
- builds on best practice
- may be suitable for those seeking evidence for their continuing professional development.

Annexe A: Progression pathways

The Pearson qualification framework for the fashion and textiles sector

Level	General qualifications	Diplomas	BTEC vocationally-related qualifications	BTEC Specialist qualification / professional	NVQ / competence
8					
7					
6					
5			Pearson BTEC Level 5 HND Diploma in Fashion and Textiles (QCF)		
4			Pearson BTEC Level 4 HNC Diploma in Fashion and Textiles (QCF)	Pearson Edexcel Level 4 Diploma in Technical Textiles and Apparel (QCF)	

Level	General qualifications	Diplomas	BTEC vocationally-related qualifications	BTEC Specialist qualification/ professional	NVQ/ competence
3				<p>Pearson BTEC Level 3 Diploma in Textile Design and Manufacture (QCF)</p> <p>Pearson BTEC Level 3 Diploma in Apparel, Footwear or Leather Production (QCF)</p>	<p>Pearson Level 3 NVQ Diploma in Manufacturing Textile Products (QCF)</p> <p>Pearson Level 3 NVQ Certificate in Apparel Manufacturing Technology (QCF)</p> <p>Pearson Level 3 NVQ Certificate in Footwear and Leather (QCF)</p>
2				<p>Pearson BTEC Level 2 Certificate in Laundry and Dry Cleaning Technology (QCF)</p> <p>Pearson BTEC Level 2 Certificate in Apparel, Footwear, Leather or Textile Production (QCF)</p>	<p>Pearson Level 2 NVQ Certificate in Laundry Operations (QCF)</p> <p>Pearson Level 2 NVQ Certificate in Manufacturing Textiles Products (QCF)</p>

Level	General qualifications	Diplomas	BTEC vocationally-related qualifications	BTEC Specialist qualification/professional	NVQ/competence
					Pearson Level 2 NVQ Certificate in Manufacturing Sewn Products (QCF) Pearson Level 2 NVQ Certificate in Footwear and Leather (QCF) Pearson Level 2 NVQ Certificate in Dry Cleaning Operations (QCF) Pearson Level 2 NVQ Certificate in Textile Care Services (QCF)
1					
Entry					

Annexe B: Quality assurance

Quality assurance of centres

Pearson's quality assurance system for all Pearson Edexcel 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 Pearson Edexcel higher-level programmes on the QCF at levels 4–7 comprises three key components.

1) Approval process

Approval to offer the Pearson Edexcel Level 4 Diploma in Technical Textiles and Apparel (QCF) will vary depending on the status of the centre.

Centres that have a recent history of delivering Pearson Edexcel qualifications at levels 4–7, and have an acceptable quality profile in relation to their delivery and assessment, will be able to gain fast track qualification approval to offer the Pearson Edexcel Level 4 Diploma in Technical Textiles and Apparel (QCF) through Edexcel Online.

Centres that do not have a recent history of delivering Pearson Edexcel qualifications at levels 4–7 (i.e. in the last four years) will be required to seek approval to offer the Pearson Edexcel Level 4 Diploma in Technical Textiles and Apparel (QCF) through the existing Pearson 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.

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 Pearson 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 Pearson's appointed 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. Pearson reserves the right to confirm independently that these arrangements are operating to Pearson's satisfaction.

Pearson 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 to assist the centre in correcting the problem.

3) Independent assessment review

The internal assessment outcomes reached for all Pearson Edexcel higher level programmes on the QCF at levels 4–7 are subject to an independent assessment review by a Pearson-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 arrangements for all centres

Regardless of the type of centre, Pearson 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.

Quality assurance model for delivery of the qualification within a Pearson Edexcel Higher Apprenticeship Framework

When delivered as part of a Pearson Edexcel Higher Apprenticeship, the Pearson quality assurance model for the qualifications in this specification will be:

- a twice-yearly visit from an Pearson-appointed external examiner to sample internal verification and assessor decisions for competence-based and knowledge-based units and to review centre-wide quality assurance systems.

Quality assurance model for delivery of the qualification as a stand-alone qualification

When delivered as stand-alone qualifications, the Pearson quality assurance model for the qualifications in this specification will be:

- annual visit from an Pearson-appointed external examiner to sample internal verification and assessor decisions for competence-based and knowledge-based units and to review centre-wide quality assurance systems.

For further details, go to the Quality Assurance pages of the Edexcel website: <http://pearsonwbl.edexcel.com>

The Pearson quality assurance processes will involve:

- gaining centre recognition and qualification approval if a centre is not currently approved to offer Pearson qualifications
- annual visits to centres by Pearson for quality review and development of overarching processes and quality standards. Quality review and development visits will be conducted by an Pearson quality development reviewer
- annual visits by occupationally competent and qualified Pearson Standards Verifiers for sampling of internal verification and assessor decisions for the occupational sector
- the provision of support, advice and guidance towards the achievement of National Occupational Standards.

Centres are required to declare their commitment to ensuring quality and appropriate opportunities for learners that lead to valid and accurate assessment outcomes. In addition, centres will commit to undertaking defined training and online standardisation activities.

Annexe C: Centre certification and registration

Pearson Standards Verifiers will provide support, advice and guidance to centres to achieve Direct Claims Status (DCS). Pearson will maintain the integrity of Pearson higher level qualifications elsewhere through ensuring that the awarding of these qualifications is secure. Where there are quality issues identified in the delivery of programmes, Pearson will exercise the right to:

- direct centres to take action
- limit or suspend certification
- suspend registration.

The approach of Pearson in such circumstances is to work with the centre to overcome the problems identified. If additional training is required, Pearson will aim to secure the appropriate expertise to provide this.

What are the access arrangements and special considerations for the qualification in this specification?

Centres are required to recruit learners to Pearson qualifications with integrity.

Appropriate steps should be taken to assess each applicant's potential and a professional judgement should be made 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 consult Pearson's policy on learners with particular requirements.

Pearson's policy on access arrangements and special considerations for Pearson qualifications aims to enhance access to the qualifications for learners with disabilities and other difficulties (as defined by the 1995 Disability Discrimination Act and the amendments to the Act) without compromising the assessment of skills, knowledge, understanding or competence. Please refer to *Access Arrangements and Special Considerations for BTEC and Edexcel NVQ Qualifications* for further details. www.edexcel.com.

Annexe D: Assessment requirements/ strategy

Creative Skillset Principles of Assessment – June 2011

1 Introduction

Creative Skillset is the Sector Skills Council (SSC) for the creative industries which comprise TV, film, radio, interactive media, animation, computer games, facilities, photo imaging, publishing, advertising, and fashion and textiles.

Our aim is to support the productivity of our industries to ensure that they remain globally competitive. We do this by influencing and leading; developing skills, training and education policy; and through opening up the industries to the UK's pool of diverse talent.

Creative Skillset interacts with the sector through various employers, skills agencies, providers and Awarding Organisations/Bodies (AOs/ABs). These stakeholders work in partnership to develop National Occupational Standards (NOS), qualifications and supporting documents such as assessment principles and guidance.

This document sets out principles for the assessment of vocational qualifications within the creative industries across England, Scotland, Wales and Northern Ireland and reflects the greater flexibilities which are now possible within the appropriate credit framework. The principles have been developed in partnership with AOs/ABs through the AO Forum (AOF). The forum works to establish a common approach to quality control, reflecting the requirements of the sector as a whole.

There are four annexes within this document, which provide additional information specific to particular contexts. Please refer to the relevant annex, in conjunction with the main body of the document.

2 Assessment Principles

The Assessment Principles will guide and promote a consistent approach to those elements of assessment which require further interpretation and definition. The principles should be used in conjunction with:

- *Regulatory arrangements for the Qualifications and Credit Framework (Ofqual 08/3726)*¹;
- SQA Accreditation Regulations and Criteria²
- DCELLS regulation of qualifications³
- CCEA regulation of qualifications⁴
- Information designed to support the implementation of the QCF regulatory arrangements⁵.

¹ Requirements for all organisations recognised to operate in the QCF

² Please see <http://www.sqa.org.uk/sqa/42165.2702.html> for further information

³ Please see <http://wales.gov.uk/topics/educationandskills/qualificationsinwales/?lang=en> for further information

⁴ Please see <http://www.rewardinglearning.org.uk/regulation/index.asp> for further information

⁵ Operating rules for using the term 'NVQ' in a qualification title; Identifying purposes for the qualification in the QCF; and Guidance on qualification titles within the Qualification and Credit Framework

Creative Skillset also expect AO/ABs to operate in-line with The Equality Act 2010, in order to protect the rights of individuals and advance equality of opportunity for all.

The units of assessment within Creative Skillset qualifications that map to National Occupational Standards and attest to occupational competence set out what a learner is expected to know, understand or be able to do as the result of the learning process. Units can be competence based, knowledge based or a combination of both.

Assessment decisions for both competence and knowledge based units must only be made by a qualified Assessor (see sec 3).

Assessment of competence based units should occur in the work place or a real work environment under normal commercial operating conditions (simulation is acceptable under certain circumstances, see Annex 1).

The assessment of knowledge based units can take place in or outside of the working environment. Where assessment is electronic the assessment decisions are made by the person/organisation that set the answers.

Primary sources of evidence also differ across competence based and knowledge based units/learning outcomes.

For competence based learning outcomes the following sources can be used:

- Direct observation of learners carrying out the relevant task;
- Inspection and evaluation of products produced (this includes electronic evidence where appropriate);
- Questioning of learners to support performance;
- Simulation where agreed (see Annex 1);
- Expert Witness where specific expertise is required;
- Supplementary evidence (i.e. Witness Testimony);
- Recorded Internal competency assessments carried out as part of a structured in-company approach (i.e. ISO9000). Assessors should carry out only confirmatory observation and collect.

For knowledge based learning outcomes the following primary sources of evidence should include:

- Oral or written exams/test;
- Presentations;
- Simulation on where agreed (see Annex 1);
- Assignments;
- Projects;
- Case studies.

Please note: This is not an exhaustive list, all of the assessment methods associated with effective delivery and assessment of qualifications that attest to occupational competency may be used.

Where imported units occur within Creative Skillset qualifications the appropriate Sector Skills Council assessment guidance should be referred to.

2.1 Expert Witness

There are a number of different niche areas within Creative Skillset's footprint and there are numerous occupations within these areas. A small number of specialist qualifications have been developed in order to reflect this i.e. bespoke shoe makers, bespoke tailors, saddlers, leather producers and garment/textile technicians, grips, crane technicians, focus pullers etc.

These specialist occupations are reflected in Creative Skillset's vocational qualifications and Occupational and Functional map and, in many cases, Assessors are not competent in relation to the specific occupational skill demonstrated within job roles. Sector employers have been consulted on this issue and trust the ability of experienced employees to contribute substantially to the assessment process as an **Expert Witness**⁶. However please note the Assessor will have overarching responsibility for the assessment and will make the final judgment.

2.2 Simulation

In a sector as diverse as the creative industries, there are work environments that are difficult to simulate i.e. live sets, bespoke production, and high volume manufacture. Therefore, unless otherwise indicated, it is a general principle that evidence from simulations would only be accepted under the following circumstances:

- performing a task that could be deemed to pose risks to the learner or others (e.g. during the evacuation of a studio following detection of a fire);
- performing health and safety operations where there could be major disruption to the work process or where events rarely occur;
- activities which would be very costly to perform in terms of time, materials and equipment;
- performing specific activities which would be considered non-routine under commercial working practices (e.g. the use of prosthetics in make-up).

The use of appropriate simulations must be agreed with the external quality assurance staff (External Verifier appointed by the AO/AB prior to the simulation taking place and should be carried out within an agreed realistic working environment, please see Realistic Working Environment (RWE) Criteria Annex 1.

2.3 Supplementary Evidence/Witness Testimony

Supplementary evidence of performance is also recognised as valuable to demonstrate competence. In particular Witness Testimony may support situations where evidence collected is deemed insufficient to fully meet the standards.

Supplementary evidence must relate directly to the learners' performance on-the-job, and may include professional discussion, product and photographic evidence, relevant documentation, reports, presentations and work records etc. This also may include internal competency assessments carried out as part of structured in-company approach. Where these assessments are recorded and subject to audit (i.e. ISO9000 Assessor should carry out confirmatory observations and collect evidence as appropriate

⁶ An Expert Witness is an expert on the occupation to be assessed i.e. experienced line manager or peer, and not to be consulted as a professional Assessor

2.4 Recognition of prior learning (RPL)/Accreditation of Prior Learning (APL)

Evidence from past achievement may be included as permissible evidence within the assessment methods.

Evidence of knowledge and understanding can be offered as supplementary evidence as long as it is a measurable assessed outcome of learning which links to aspects of knowledge and understanding detailed in the National Occupational Standards and confirms current competence.

Assessors should make best use of all the assessment methods available to them in ensuring the most reliable and effective use is made of claims of prior learning and experience which relate to the individual circumstances.

All learners must demonstrate current competence with respect to accreditation of prior learning (APL)

The Assessor must ensure that the most reliable and effective evidence is used relating to claims of prior learning.

3 Quality assurance

Creative Skillset encourages AO/ABs to adopt flexible, innovative approaches to assessment whilst working within regulatory guidelines and quality assurance systems. The quality of the assessment and verification process is the responsibility of the AO/ABs and a consistent internal and external quality assurance process must be in place.

Assessment and verification personnel must be competent within the areas they assess. Individual roles within the assessment process are detailed below; AO/ABs are requested to monitor the impact of these criteria on the quality of assessment.

Role of the Assessor

The role of an Assessor is to make accurate and objective decisions as to whether the learner's performance meets the assessment criteria. The Assessor is ultimately responsible for assessment of the learners' competence and must collate the evidence of competence and understanding in the areas being assessed to the satisfaction of the internal quality assurance staff (Internal Verifiers).

Where the Expert Witness concept is utilised the Assessor must:

- Request the company nomination of an appropriate person in line with Expert Witness criteria;
- Ensure the Expert Witness has the required competence and knowledge;
- Brief and support the Expert Witness as appropriate;
- Ensure the Expert Witness understands the differences in the roles of assessment and training;
- Ensure the Expert Witness understands the units being assessed, and his/her role in the assessment process.

Occupational competence of Assessor

Creative Skillset recommend that Assessors:

- Provide current evidence of competence and understanding in the areas to be assessed to the satisfaction of the External quality assurance staff (External Verifier). This may be achieved through experience or continual professional development;
- Hold or be working towards achievement of the relevant Assessor qualifications highlighted by the qualifications regulatory authorities and set out in national requirements and guidance;
- Demonstrate commitment to be working towards the relevant assessment standards within the Learning and Development National Occupational Standards (2010). This can be achieved through the attainment of an appropriate qualification based on the Standards (this is mandatory for SQA accredited qualifications), or through other externally or internally verified training and assessment;
- Have a full understanding of the units and requirements of the qualification being assessed.

Desirable:

Hold or be working towards appropriate technical qualifications in addition to Assessor qualifications.

Exceptions:

When utilising the Expert Witness concept, full competence and understanding in the areas being assessed is not required. **However this must be agreed with the relevant AO/AB.**

Please Note: The above information is basic principles and guidance only - requirements may vary across AO/ABs and qualifications. Please see Annex 4 for information specific to SQA accredited qualifications.

Role of Expert Witness

The role of the Expert Witness (EW) is to work in partnership with the Assessor, providing technical expertise and working knowledge which will enable the Assessor to make an informed decision with regard to the learner's competence and achievement of the units being undertaken.

The EW must be fully briefed by the Assessor or internal quality assurance staff (Internal Verifier) on his/her role in the assessment process, the units to be assessed and the differences between assessment and training

Note: The Assessor will have overall and ultimate responsibility for the assessment of evidence provided and the final assessment decision.

Occupational Competence of Expert Witnesses

Creative Skillset recommends that Expert Witnesses have:

- Practical experience in the skills being assessed;
- Competence in the skills area to be assessed;
- Possess a working knowledge of the units being assessed.

Desirable:

Hold or be working towards an appropriate unit of competence in the assessment of workplace performance.

Please Note: The above information is basic principles and guidance only - requirements may vary across AO/ABs and qualifications.

Role of the internal quality assurance staff (Internal Verifier)

Internal Verifiers (IVs) are appointed by approved centres to ensure consistency and quality of assessment. The IV monitors assessment activities and provides guidance, feedback and support to Assessors

Occupational Competence of internal quality assurance staff (Internal Verifier)

Creative Skillset recommend that Internal quality assurance staff :

- Demonstrate sufficient and current understanding of the units/qualifications to be internally verified;
- Hold or be working towards achievement of the relevant internal quality assurance qualifications approved by the qualifications regulatory authorities and set out in national requirements and guidance;
- Know where and how to access specialist advice when additional technical knowledge relating to the unit/ qualification is being assessed;
- Demonstrate commitment to be working towards the assessment standards within the Learning and Development National Occupational Standards (2010). This can be achieved through the attainment of an appropriate qualification based on the Standards (this is mandatory for SQA accredited qualifications), or through other externally or internally verified training and assessment.

Please Note: The above information is basic principles and guidance only - requirements may vary across AO/ABs and qualifications. Please see Annex 4 for information specific to SQA accredited qualifications.

Role of the external quality assurance staff (External Verifier)

External quality assurance staff (EVs) are appointed by AO/ABs to check the accuracy of assessment and verification decisions ensuring they comply with national standards and AO/AB procedures and provide a supporting role for centres.

Occupational competence of external quality assurance staff (External Verifier)

Creative Skillset recommend that external quality assurance staff have:

- No connection with the assessment centres in order to maintain objectivity;
- Fully understand the AO/AB quality assurance;
- Demonstrate occupational knowledge appropriate to the sector in which they are externally verifying;
- Demonstrate sufficient and current understanding of the qualification to be externally verified;
- Hold or be working towards achievement of the relevant external verifiers qualifications approved by the qualifications regulatory authorities and set out in national requirements and qualification guidance;
- Hold or be working towards achievement of the relevant external quality assurance qualifications highlighted by the qualifications regulatory authorities and set out in national requirements and guidance;
- Demonstrate commitment to be working towards the assessment standards within the Learning and Development National Occupational Standards (2010). This can be achieved through the attainment of an appropriate qualification based on the Standards (this is mandatory for SQA accredited qualifications), or through other externally or internally verified training and assessment;
- Know where and how to access specialist advice when additional technical knowledge relating to the unit/ qualification is being assessed.

Exceptions:

Where there is a shortage of external quality assurance staff (External Verifiers) from the sector, staff from a different sector background can be used provided they are supported by a person who has current occupational knowledge.

Please Note: The above information is basic principles and guidance only - requirements may vary across AO/ABs and qualifications. Please see *Annex 4* for information specific to SQA accredited qualifications.

3.1 External Monitoring and Risk Assessment

Statistical monitoring and the use of a common risk rating system is a means of identifying cases in which staff, practise and systems differ from expected quality patterns. Creative Skillset recommends that AO/ABs adopt a risk management system consistent with the regulatory authorities and depending on the risk rate associated with the qualification type, the centre's performance and previous record, the AO/ABs will decide on the frequency of external monitoring and quality assurance activities.

The AO/AB Forum have established and agreed a common approach to sharing statistics, including the numbers of registrations, certification and centres on a quarterly basis. This information will be monitored and used to inform future SSC activity.

Annex 1 – Realistic Work Environment (RWEs) and Simulation Criteria

In a sector as diverse as the creative industries there are work environments that are difficult to simulate i.e. live sets, bespoke production, and high volume manufacture, automated production. However, high quality RWEs and simulations assessed via observation are accepted in specific circumstances across all levels as detailed below;

- performing a task that could be deemed to pose risks to the learner or others (e.g. during the evacuation of a studio following detection of a fire);
- performing health and safety operations where there could be major disruption to the work process or where events rarely occur;
- activities which would be very costly to perform in terms of time, materials and equipment;
- performing specific activities which would be considered non-routine under commercial working practices e.g. the use of prosthetics in make-up).

The use of appropriate simulations and RWEs **must** be agreed with external quality assurance staff appointed by the AO/AB prior to the simulation taking place. The learner must be provided with information, advice and guidance as to the activity and outcomes to be achieved.

RWEs and simulations must be designed to match the physical characteristics of an operational environment and must impose pressures which are consistent with workplace expectations, it is essential to provide an environment which allows the learner to experience and perform work activities using tools and equipment, procedures and accommodation which are similar to those found in a place of work as detailed below:

- Same pressures of time, access to resources and access to information as would be expected if the activity were real;
- Use real plant, materials, tools and equipment where possible;
- Provide interaction with colleagues and contacts using the communication media that would be expected at work (if relevant);
- Ensure that 'dummy' materials take the same form as the real thing e.g. using water to mimic liquid spillage; using sand to mimic powder spillage;
- If in naturally occurring circumstances, the environment would affect the learner's actions and decision-making (e.g. in camera, lighting, sound roles), the RWE should replicate the situation in which the required action/outcome would occur;
- If in naturally occurring circumstances, the environment would affect the learner's actions and decision-making (e.g. production, makeup and hair roles), the other people with which the learner is required to interact should behave 'in character' for the role they are playing within the simulation.

Annex 2 – Additional Assessment Guidance specific to fashion and textiles NOS

Manufacture Textiles Products

Creative Skillset's manufacture textile products NOS are primarily targeted towards learners working in industry using industrial scale motorised/ computerised machinery and equipment. However standards have been developed to specifically cover hand weaving, operation of hand looms, making repairs by hand and inspection of cloth. Additional guidance in relation to assessing these standards is detailed below:

TEX2 - Make the Warp

- Loom may not have a pre-loaded sett value, thus the Assessor must seek learner understanding of how to achieve required sett during weaving.

TEX3 - Prepare the warp for weaving

- Where weaving has not been carried out on the site where the warp has been prepared, assess learner knowledge of weavers' work areas, resources and equipment to promote and maintain efficiency.

TEX4 - Manufacture woven textiles

- Whilst an understanding of production cycles and downtime is required, it should be relative to individual capabilities;
- Production problems need to be resolved by the weaver wherever possible.

TEX6 - Organising and controlling the weaving process

- Issues surrounding activities such as shift change need not be assessed;
- Compressed air machinery may or may not be used;
- Loom changeover is not a requirement, however beam changeover is;
- Loom pick rate and tension needs to be set by the weaver and monitored throughout process;
- Ideally loom repairs should be assessed when naturally occurring, however this can be simulated if natural occurrence does not take place.

TEX9 - Contribute to quality of woven fabric

- Processing and product quality issues have to be resolved by the individual weaver;
- Assessment of maintaining the continuity of production has to be relevant to the individual weaver;
- Record keeping and storage best suited to weaver.

Footwear and Leathersgoods

A large number of footwear producers follow a common skills grading system, if available this may be used to inform assessment.

Apparel Manufacturing Technology - Computer Aided Design / Computer Aided Manufacture (CAD/CAM)

Apparel qualifications are split into specific pathways, two additional and separate pathways to cover the functions carried out by pattern technologists who use CAD/CAM technology have been created as follows:

- CAD CAM Pattern and Grading Technologist (Computer + Manual) – where a combination of manual and computer pattern creating, grading and lay planning techniques are carried out;
- CAD CAM Pattern and Grading Technologist (Computer) – if this pathway is to be undertaken, the learner must demonstrate competence and understanding in the relevant manual activities.

Annex 3 - Additional requirements for competence units in the Qualifications and Credit Framework (QCF)

Please note that the main Assessment Principles document should now be used for new qualifications. When qualifications referencing this 'Additional Requirements' document are due for review, the Assessment Principles document should be referenced instead.

Purpose

- 1 To provide QCF submitting organisations with a reference tool they must signpost in the additional information section of any unit which has an aim of assessing competence.
- 2 To provide AO/ABs with a set of requirements that must be used to ensure that 'competence' units are assessed and verified in accordance with the needs of employers and practitioners in the Creative Industries.
- 3 To reduce bureaucracy, whilst maintaining integrity and quality assurance of assessment and verification of achievement.

Definition of competence

The 'proven/demonstrated' – and individual – capacity to use know-how, skills, qualifications or knowledge in order to meet usual – and changing – occupational situations and requirements. The notion of competence may include formal qualification as well as elements such as the capacity to transfer skills and knowledge to a new occupational situation, or the capacity to innovate. The level or kind of competence may be assessed by evaluating the individual's ability to use his or her skills. Competencies can be specialised (such as the control of computerised processes), methodological (ability to think and decide, and capacity to innovate), or social (language and communication skills, and teamwork)⁷.

⁷ QCF glossary of terms, 2009

Background

Qualifications are not used as a licence to practice in the creative media industries. However, in certain occupational areas, employers and practitioners support formal recognition of the demonstration of competence in the workplace in the interests of health and safety⁸. There have been relatively few occupational competence qualifications developed in the sector but those which have, have been a meaningful and valuable solution to associated employers and practitioners. Until the introduction of the QCF, such qualifications had been developed as NVQs, based entirely and explicitly on the originating suites of National Occupational Standards (NOS) and NVQ Code of Practice.

NVQs are just one way of assessing and demonstrating occupational competence. The QCF, in which all future qualifications will be developed, allows for more flexibility in terms of unit and qualification design and assessment. For those subsectors interested in moving away from NVQs, we aim to explore the development of competence units that are fit for purpose and maintain high-quality approaches to assessment and verification.

This document is targeted at the assessment at unit level, rather than qualification level. (A qualification given a purpose of demonstrating competence may consist of a mixture of units, including other knowledge and skills, as agreed with Creative Skillset.) All units used to demonstrate competence should be based entirely and explicitly on relevant NOS. Within each unit's additional information section, this assessment requirements document must be signposted.

Assessment requirements

- 1 QCF units that are used to assess competence within the QCF must be assessed and quality assured in accordance with the following requirements.
- 2 When QCF units are used to assess competence, AO/ABs are required to make sure their recognised assessment centres understand how learners will be assessed.
- 3 AO/ABs' own assessment methodologies must meet Creative Skillset's additional requirements.
- 4 Learners must complete real work activities in order to produce evidence to demonstrate they have met the QCF units (and therefore NOS) and are occupationally competent.
- 5 When a learner cannot complete a real work activity, simulation is allowed. Unless otherwise indicated it is a general principle that evidence from simulations should only be employed under the following circumstances:
 - a learner is required to complete a work activity that does not occur on a regular basis and therefore opportunities to complete a particular work activity do not easily arise (e.g. the use of prosthetics in make-up);
 - a learner is required to respond to a situation that rarely occurs, such as responding to an emergency situation;
 - the safety of a learner and/or resources would be put at risk (e.g. during the evacuation of a studio following detection of a fire).

⁸ Page 5, Skillset's SQS 2008

- 6 When simulation is used, Assessors must be confident that the simulation replicates the workplace to such an extent that learners will be able to fully transfer their occupational competence to the workplace and real situations.
- 7 Units that must not be assessed by simulation must be identified in the assessment methodologies for the qualification or family of qualifications, as agreed with Creative Skillset.
- 8 Learners must be assessed by Assessors who:
 - are occupationally competent in the occupational areas they are assessing where they have sufficient and relevant technical/occupational competence in the unit, at or above the level of the unit being assessed and as defined by the assessment methodology for that qualification;
 - must hold or be working towards a suitable Assessor qualification⁹ to confirm they understand assessment and how to assess learners, unless a recognised assessment centre can demonstrate their training and development activity for Assessors maps 100% to the NOS on which these qualifications are based. If this is the case, the mapping process must be agreed by the AO/AB as providing the equivalent level of rigour as the achievement of the unit qualification;
 - are fully conversant with the unit(s) against which the assessments and verification are to be undertaken.
- 9 All Assessors must carry out assessment to the standards specified in the relevant Learning and Development NOS.
- 10 All assessment decisions made by a trainee Assessor must be checked by a qualified Assessor or an Assessor recognised by an AO/AB.
- 11 Trainee Assessors must have a plan, which is overseen by the recognized assessment centre, to achieve the relevant Assessor qualification(s) within an agreed timescale.

Quality assurance requirements

- 12 When a QCF unit is used to demonstrate competence, AO/ABs are required to make sure their recognised assessment centres understand how the qualification is quality assured.
- 13 QCF units that assess competence must be verified:
 - internally by an internal verifier, who is accountable to the assessment centre;
 - externally by an external verifier, who is accountable to the AO/AB or an agent of the AO/AB.

⁹ Currently an Assessor could hold qualification A1 and/or qualification A2, mapped to the Learning and Development NOS (or from the past unit D32 and/or unit D33). SSCs may also identify other suitable equivalent qualifications.

- 14 With reference to internal verification, internal verifiers must:
- hold or be working towards a suitable internal verifier qualification¹⁰ to confirm they understand how to internally verify assessments;
 - have sufficient and relevant technical/occupational familiarity in the unit(s) being verified;
 - be fully conversant with the standards and assessment criteria in the units to be assessed;
 - understand the AO/AB's quality assurance systems and requirements for this qualification.
- 15 Trainee internal verifiers must have a plan, which is overseen by the recognised assessment centre, to achieve the internal verifier qualification within an agreed timescale.
- 16 With reference to external verification, external verifiers must:
- hold or be working towards a suitable external verification qualification¹¹ to confirm they understand and are able to carry out external verification;
 - have no connections with the assessment centre, in order to maintain objectivity;
 - have sufficient and relevant technical/occupational understanding of the unit(s) being verified;
 - be fully conversant with the standards and performance criteria in the units to be assessed;
 - understand the AO/AB's quality assurance systems for this qualification.
- 17 Trainee external verifiers must have a plan, overseen by the AO/AB, to achieve the external verifier qualification within an agreed timescale.
- 18 AO/ABs must decide on the frequency of external monitoring activities, which must be based on the risks associated with a qualification of this type, and an assessment of the centre's performance and previous record.
- 19 In agreement with the appropriate SSC, AO/ABs can develop suitably constituted audit processes, when quality assurance and monitoring systems already exist in workplace assessment environments.

Equality and Diversity

- 20 AO/ABs and their assessment centre staff must ensure no learner is discriminated against either directly or indirectly on the grounds of race, colour, nationality, ethnic or national origin, sex, marital status, gender reassignment, sexual orientation, social status, religious belief, political opinion, language (only in relation to the Welsh language and the legal requirements of the Welsh Language Act), disability, long-standing or debilitating disease or age.

¹⁰ Currently an internal verifier needs to hold qualification V1 (or from the past unit D34.) SSCs also identify other suitable equivalent qualifications.

¹¹ Currently an external verifier needs to hold qualification V2 (or from the past unit D35.) SSCs also identify other suitable equivalent qualifications.

Changes to the A and V qualifications

21 The current A1, A2, V1 and V2 qualifications expire on the 31st December 2010 and will be replaced by new qualifications for assessing and assuring the quality of assessment at levels 3 and 4. The new qualifications will sit within the new Qualifications and Credit Framework (QCF).

Annex 4 - Assessor and Verifier Competence (May 2011)

SQA Accreditation approved the LSIS (formerly LLUK) Learning and Development SVQs and Units in October 2010 and awarding bodies can now seek accreditation for these. The SVQs and Units are derived from the Learning and Development NOS which were approved by the UK NOS Panel in March 2010.

Those Assessors and Verifiers who currently hold D or A and V Units are still considered to be qualified Assessors and External/Internal Verifiers and are not required to undertake the new Units or SVQs. Any new assessors, internal verifiers and/or external verifiers should undertake the Learning and Development Units which are based on the new NOS (see below).

The A and V stand-alone Units have been replaced by the following Learning and Development (L and D) Units:

- Learning and Development Unit 9D - Assess workplace competence using direct methods – replacing Unit A2
- Learning and Development Unit 9DI – Assess workplace competences using direct and indirect methods – replacing Units A1/2
- Learning and Development Unit 11 – Internal Quality Assurance – replaces V1 and D34
- Learning and Development Unit 12 – External Quality Assurance – replaces V2 and D35

In addition to accrediting either the full SVQ or the relevant SVQ Units, we are happy to accept other Assessor/Verifier qualifications for accreditation provided that the qualification can be shown to cover the NOS as above.

For the purposes of quality assurance in centres, we will also accept Assessor/Verifier qualifications which have been accredited by Ofqual where the qualifications are based on the above Learning and Development NOS.

To minimise the burden on centres, Awarding Bodies must recognise that where an Assessor/Verifier has achieved an accredited Assessor/Verifier qualification then there is no need for the Assessor/Verifier to repeat with a different version. For example, if a centre's staff has completed the relevant SVQ Units then the centre must not be asked to replicate this with another qualification or Units.

How does this affect SSCs?

Assessment Strategies/Principles

To ensure that SSCs maintain up-to-date standards when creating or refreshing assessment strategies, they should replace references to the A and V Units with references to the qualifications based on the new National Occupational Standards for defining Assessor and Verifier occupational competence.

Any Assessor/Verifier qualification must contain **both** knowledge **and** competence and be accredited by either SQA Accreditation or Ofqual. The assessment strategy/principles for the SQA accredited qualifications should follow our current approval procedure. If you require further information please contact your assigned SQA Accreditation Manager.

SVQs

Where an existing SVQ contains the A and V Units as part of the qualification structure, the SSC must consider the SVQ accreditation date so that the qualification structure can be revised, where appropriate, to include the new L & D Units when the SVQ is reaccredited.

How does this affect Awarding Bodies?

Accreditation

Where the SVQ structure contains the A and V Units, Awarding Bodies would be expected to liaise with the SSCs/SSOs to ensure that the qualification structure is, where appropriate, revised to replace the A and V Units.

Any Assessor/Verifier qualification must contain **both** knowledge **and** competence and be accredited by either SQA Accreditation or Ofqual. If you require further information please contact your assigned SQA Accreditation Manager.

Awarding Bodies must ensure that new Assessors and Verifiers are registered for the new Learning and Development Units rather than the A & V Units.

Assessment Strategies/Principles

Where Assessment Strategies/Principles have been updated, Awarding Bodies must ensure that their Assessors and Verifiers:

- meet the occupational competency requirements of the Assessment Strategy/Principles
- carry out assessment and verification activities in line with the new Learning and Development Units.

Annexe E: Personal, Learning and Thinking Skills assessment and recognition (England)

Summary of Personal, Learning and Thinking Skills

The assessment and achievement of the mandatory units within the combined qualification constitutes the achievement of Personal, Learning and Thinking Skills (PLTS). Creative Skillset has produced sector documents for the appropriate level. These documents are known as the 'Personal Learning and Thinking Skills - Signposting and Assessment Checklist'. The 'PLTS Assessment checklist' can be used by assessors to formally assess and record the achievement of PLTS that have been demonstrated by the candidate and referenced within portfolios. Providers must incorporate these appropriately into their delivery of the framework.

Time has been allocated in the overall framework GLH (please see the GLH section of this document) to allow for both ongoing dialogue between assessor and learner to review progress towards achievement and the final formal assessment of PLTS. Training providers must incorporate the PLTS appropriately into their delivery of the framework, and share this information with the apprentice and employer so all parties are aware of the ways in which each PLTS is met. It is important that apprentices are introduced to PLTS during induction and for PLTS to be reiterated throughout delivery of the framework.

Awarding organisations are not responsible for quality assuring the achievement of PLTS within their qualifications. When applying for certification, apprentices will be required by the 'certifying authority' to provide a record of successful demonstration of these skills by the submission of the completed 'Personal Learning and Thinking Skills - Signposting and Assessment Checklist' (the provider can facilitate this process on behalf of the apprentice also).

For further detail on the signposting and documentation for PLTS, please visit <http://www.creativeskillset.org/fashionapprenticeship>. For any other technical queries please email apprenticeships@creativeskillset.org.

Creative Thinking

Young people think creatively by generating and exploring ideas, making original connections.

They try different ways to tackle a problem, working with others to find imaginative solutions and outcomes that are of value.

Skills, behaviours and personal qualities:

- generate ideas and explore possibilities
- ask questions to extend their thinking
- connect their own and others' ideas and experiences in inventive ways
- question their own and others' assumptions
- try out alternatives or new solutions and follow ideas through
- adapt ideas as circumstances change.

Delivery

The Creative Thinking PLTS have been mapped by Creative Skillset, awarding organisations, providers, sector assessors and sector specialists into the combined qualification for each of the sector pathways. This will signpost the potential assessment opportunities in each of the mandatory units for Personal, Learning and Thinking Skills areas. This approach aids both flexibility for assessment and increases opportunities for evidence.

Independent Enquiry

Young people process and evaluate information in their investigations, planning what to do and how to go about it. They take informed and well-reasoned decisions, recognising that others have different beliefs and attitudes.

Skills, behaviours and personal qualities:

- identify questions to answer and problems to resolve
- plan and carry out research, appreciating the consequences of decisions
- explore issues, events or problems from different perspectives
- analyse and evaluate information, judging its relevance and value
- consider the influence of circumstances, beliefs and feelings on decisions and events
- support conclusions, using reasoned arguments and evidence.

Delivery

The Independent Enquiry PLTS have been mapped by Creative Skillset, awarding organisations, providers, sector assessors and sector specialists into the combined qualification for each of the sector pathways. This will signpost the potential assessment opportunities in each of the mandatory units for Personal, Learning and Thinking Skills areas. This approach aids both flexibility for assessment and increases opportunities for evidence.

Reflective Learning

Young people evaluate their strengths and limitations, setting themselves realistic goals with criteria for success. They monitor their own performance and progress, inviting feedback from others and making changes to further their learning.

Skills, behaviours and personal qualities:

- assess themselves and others, identifying opportunities and achievements
- set goals with success criteria for their development and work
- review progress, acting on the outcomes
- invite feedback and deal positively with praise, setbacks and criticism
- evaluate experiences and learning to inform future progress
- communicate their learning in relevant ways for different audiences.

Delivery

The Reflective Learning PLTS have been mapped by Creative Skillset, awarding organisations, providers, sector assessors and sector specialists into the combined qualification for each of the sector pathways. This will signpost the potential assessment opportunities in each of the mandatory units for Personal, Learning and Thinking Skills areas. This approach aids both flexibility for assessment and increases opportunities for evidence.

Team Working

Young people work confidently with others, adapting to different contexts and taking responsibility for their own part. They listen to and take account of different views. They form collaborative relationships, resolving issues to reach agreed outcomes.

Skills, behaviours and personal qualities:

- collaborate with others to work towards common goals
- reach agreements, managing discussions to achieve results
- reach agreements, managing discussions to achieve results
- adapt behaviour to suit different roles and situations, including leadership roles
- show fairness and consideration to others
- take responsibility, showing confidence in themselves and their contribution
- provide constructive support and feedback to others.

Delivery

The Team Working PLTS have been mapped by Creative Skillset, awarding organisations, providers, sector assessors and sector specialists into the combined qualification for each of the sector pathways. This will signpost the potential assessment opportunities in each of the mandatory units for Personal, Learning and Thinking Skills areas. This approach aids both flexibility for assessment and increases opportunities for evidence.

Self Management

Young people organise themselves, showing personal responsibility, initiative, creativity and enterprise with a commitment to learning and self-improvement. They actively embrace change, responding positively to new priorities, coping with challenges and looking for opportunities.

Skills, behaviours and personal qualities:

- seek out challenges or new responsibilities and show flexibility when priorities change
- work towards goals, showing initiative, commitment and perseverance
- organise time and resources, prioritising actions

- anticipate, take and manage risks
- deal with competing pressures, including personal and work-related demands
- respond positively to change, seeking advice and support when needed
- manage their emotions, and build and maintain relationships.

Delivery

The Self management PLTS has been mapped by Creative Skillset, awarding organisations, providers, sector assessors and sector specialists into the combined qualification for each of the sector pathways. This will signpost the potential assessment opportunities in each of the mandatory units for Personal, Learning and Thinking Skills areas. This approach aids both flexibility for assessment and increases opportunities for evidence.

Effective Participation

Young people actively engage with issues that affect them and those around them. They play a full part in the life of their school, college, workplace or wider community by taking responsible action to bring improvements for others as well as themselves.

Skills, behaviours and personal qualities:

- discuss issues of concern, seeking resolution where needed
- present a persuasive case for action
- propose practical ways forward, breaking these down into manageable steps
- identify improvements that would benefit others as well as themselves
- try to influence others, negotiating and balancing diverse views to reach workable solutions
- act as an advocate for views and beliefs that may differ from their own.

Delivery

The Effective Participation PLTS have been mapped by Creative Skillset, awarding organisations, providers, sector assessors and sector specialists into the combined qualification for each of the sector pathways. This will signpost the potential assessment opportunities in each of the mandatory units for Personal, Learning and Thinking Skills areas. This approach aids both flexibility for assessment and increases opportunities for evidence.

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