Technical and Vocational Education and Training (TVET) Council

Occupational Standards of Competence

Textile and Material Design Level 3

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Creative Skill Set: standards.creativeskillset.org

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Qualification Overview

NVQB

in

Textile and Material Design

Level 3

Qualification Overview

The NVQB in Textile and Material Design is designed to train providers and employers who provide a range of manufacturing services for clients in the textile industry. Employers can use this qualification to support employees in developing their skills, planning their careers and/or in the development of businesses to maintain suitable employment.

Employees at this level must have an understanding of what skills and knowledge are required for working with a range of textiles, fabrics and materials, to produce a range of products appropriate for the penetration of local, regional and international markets. They must also be able to contribute to the development of the team and improve the business process for better efficiency in the operations and production process.

Like all NVQs, this qualification is competence based. This means that it is linked to candidates' ability to competently perform a range of tasks connected with their work. Candidates must plan a programme of development and assessment with their assessor and compile a portfolio of evidence to prove that they are competent in their work role.

Who is this qualification for?

The qualification is intended for persons who may work in the garment and textile manufacturing industry as well as in fashion designing and interior decorating. The occupations for which the qualification has been developed include garment, fabric and textile technicians, machinists, tailors, designers, market research personnel, sales and marketing executives, fashion stylists and persons working within a general manufacturing operation. The qualification may be appropriate for persons already holding a relevant professional or vocational qualification in areas such as garment making, textile manufacture, creative arts and design, fashion illustration and design.

A03403 - APPROVED NATIONAL VOCATIONAL QUALIFICATION STRUCTURE

TEXTILE AND MATERIAL DESIGN LEVEL 3

To achieve a full award, candidates must complete **all** sixteen (16) mandatory units.

Mandatory Units (All must be completed.)	**CODES**
1. Apply fabric knowledge	**U63103**
1.1 Analyze and interpret design requirements	
1.2 Apply design knowledge	
2. Contribute to the promotion and sale of textile and material designs and services	**U63203**
2.1 Research and prepare proposals and quotations	
2.2 Research market information and promotional methods	
3. Create and maintain technical documents and records	**U63303**
3.1 Create a technical package	
3.2 Maintain documents and records	
3.3 Work with others	
4. Create digitized patterns using computer-aided (CAM) manufacturing systems	**U63403**
4.1 Agree the design features	
4.2 Prepare and produce design	
4.3 Record and store information	
5. Design and produce creative digital colour artwork for print	**U63503**
5.1 Agree design specification for digital colour artwork	
5.2 Plan artwork production	
5.3 Produce creative digital colour artwork	
5.4 Amend digital colour artwork	
6. Dye materials and products	**U63603**
6.1 Prepare for dyeing process	
6.2 Monitor and dye items	
6.3 Check for faults	

Mandatory Units (All must be completed.)	CODES
7. Print materials and sewn products	**U63703**
7.1 Prepare for printing	
7.2 Print and monitor items	
7.3 Check for faults	
8. Develop design offer and evaluate marketing opportunities	**U63803**
8.1 Research markets	
8.2 Evaluate business opportunities	
9. Illustrate and produce designs	**U63903**
9.1 Create design concept	
9.2 Develop and present design concept	
9.3 Perform work and record information	
9.4 Agree design features	
9.5 Produce design	
10. Manage design services	**U64003**
10.1 Analyze physical and financial resource requirements	
11.2 Communicate design plan	
10.3 Develop and manage work schedules	
11. Research and produce detailed designs for textiles and materials	**U64103**
11.1 Research design information	
11.2 Identify and select information	
11.3 Originate and present ideas	
11.4 Perform work and record ideas	
12. Maintain health, safety and security at work	**U64203**
12.1 Monitor and maintain the workplace	
12.2 Follow emergency procedures	
12.3 Maintain records	

Mandatory Units (All must be completed.)		CODES
13.	**Monitor, research and exploit changing trends and development**	**U64303**
13.1	Research design trends and developments	
13.2	Evaluate materials and design technology	
14.	**Plan and manage textile and material design realization**	**U64403**
14.1	Plan and prepare designs	
14.2	Manage realization	
15.	**Maintain and improve work skills and customer service**	**U64503**
15.1	Maintain and improve work standards	
15.2	Develop learning and skills	
15.3	Provide customer service	
16.	**Research and develop design concepts, briefs, products and design response**	**U64603**
16.1	Research and evaluate information	
16.2	Produce and present ideas and design concepts	
16.3	Develop and establish design brief	
16.4	Prepare and present finished designs	

U63103 Apply fabric knowledge

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required for candidates to work with fabrics in relation to product design and production.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Analyze and interpret design requirements	1.1 Style and function of the design are analyzed.
	1.2 Required **fabric and fibre properties** are identified.
	1.3 Appropriate **fibre types** are identified and selected.
	1.4 Suitable fabrics for the design are recommended.
2. Apply design knowledge	2.1 **Fabric structures** and product production characteristics are understood and demonstrated.
	2.2 Work is performed in accordance with industry quality standards, systems and procedures.
	2.3 Legal requirements, standards, regulations, policies, procedures and professional codes are considered while work is performed.
	2.4 Safe working practices and appropriate personal conduct are demonstrated at all times.
	2.5 Problems are identified and issues resolved within the limits of own responsibility.
	2.6 Problems outside own area of responsibility are reported to the appropriate person.

2.7 Communication with **relevant persons** is performed effectively.

RANGE STATEMENT

All range statements must be assessed:

A. Fabric and Fibre Properties:

(i) Fibre/filament types
(ii) Yarn
(iii) Weight
(iv) Thickness

B. Fabric Structures:

(i) Woven fabrics
(ii) Knitted fabrics
(iii) Finishes
(iv) Fabric width
(v) Colour (hue, value and intensity)
(vi) Fabric density
(vii) Surface contour

C. Fabric and Fibre Types:

(i) Natural
(ii) Synthetic

D. Relevant Persons:

(i) Colleagues
(ii) Customers
(iii) Managers

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How to interpret design briefs, working sketches and specifications.
2. How to analyze information.
3. How to evaluate findings and present recommendations.
4. What are the product production working characteristics.
5. What are the utility and style characteristics of fabrics.
6. What are the transformation and durability characteristics of fabrics.
7. What are the organizational quality standards, systems and procedures.
8. What are your own responsibilities under the Health and Safety Act.
11. Why effective communication is important.
12. What are the organizational lines of communication, authority and reporting procedures.
13. How and to whom should problems outside own area of responsibility be reported.
14. What are the limits of own personal responsibility.
15. How and why to do a burn test analysis.
16. How to distinguish between different types of fabric and different types of weave.
17. What are the appropriate finishes for textiles and printed interior designs.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge on **more than one occasion**. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. Evidence of competence may be obtained through a variety of methods including:

- Observation
- Written/oral questioning
- Witness testimony
- Written evidence (work records, reports)
- Simulations

(3) Context of Assessment

This unit can be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing applications, codes, standards, manuals and reference materials.

Simulation **should not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

U63203

Contribute to the promotion and sale of textile material designs and services

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to sell textile and material designs to clients; design work to increase client base; work with designers to liaise with clients; prepare information about the details of projects and research information relating to the promotion of designs and design services.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Research and prepare proposals and quotations	1.1 Client requirements are identified and clarified.
	1.2 Information required to draft proposals and quotations is identified.
	1.3 **Relevant information** is selected to meet client requirements and design objectives.
	1.4 Advice is sought from **appropriate persons** in relation to proposals and quotations.
	1.5 Features and benefits of the designs and/or design services offered are determined.
	1.6 Proposals and/or quotations are prepared and drafted.
	1.7 Accurate information is communicated within agreed timescales.
2. Research market information and promotional methods	2.1 Valid and reliable **sources of information** for market research are identified.
	2.2 **Promotional methods** are identified and evaluated.
	2.3 Advice is sought from **relevant persons** to assist in the development of appropriate marketing and promotional plans.

2.4 Marketing and promotional plans are developed and produced.

2.5 Confidentiality of marketing and promotional strategies is maintained in accordance with organizational regulations and procedures.

2.6 Information relating to marketing and promotional plans is accurately recorded and correctly stored in line with organizational procedures.

RANGE STATEMENT

All range statements must be assessed:

A. Relevant Information:

(i) Target market
(i) Market research
(ii) Product specification

B. Appropriate Persons:

(i) Colleagues
(ii) Customers
(iii) Managers
(iv) External sources

C. Sources of Information:

(i) Books
(ii) Journals/periodicals
(iii) Databases
(iv) Internet
(v) Technical documents

D. Promotional Methods:

(i) Print media
(ii) Electronic media
(iii) Trade shows/exhibitions

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How to identify and clarify clients' requirements.
2. How to identify information required to draft proposals and quotations.
3. How to handle and store confidential information.
4. What is the purpose and function of the client brief.
5. How to use information retrieval systems.
6. What are the sources of advice on how designs can be realized and how to use them.
7. How to research, collate and present information for a design brief.
8. How the history of the product, competitive products and current design trends relate to the development of the design brief.
9. What is the context, situation or location in which the product will be used.
10. What previous commissions have been undertaken by the organization.
11. How to use design media, techniques and technology.
12. How to originate and present ideas to others.
13. How to select appropriate design media, including traditional and digital media.
14. How to use design and presentation media, techniques and technology.
15. What are the organizational rules, codes, guidelines and standards.
16. What are the legal and regulatory requirements that impact on the design realization process.
17. How to maintain the safety of self and others.
18. What are the regulations and procedures governing fair trade and ethical standards.
19. What are the environmental standards relevant to own area of work.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge on **more than one occasion**. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence of competence may be obtained through a variety of methods including:

- Observation
- Written/oral questioning
- Witness testimony
- Written evidence (work records, reports)
- Simulations

Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit can be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing applications, codes, standards, manuals and reference materials.

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U63303 Create and maintain technical documents and records

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to create and maintain technical records for different products that vary in style, fabric and make-up.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Create a technical package	1.1 Required **information** is identified and evaluated.
	1.2 Type and content of **information** required in the technical package is clearly established.
	1.3 Technical package is correctly formatted and covers all relevant information.
	1.4 Existing recording documents are identified and utilized.
	1.5 Documentation is prepared to comply with security and confidentiality agreements.
	1.6 Pre-production and manufacturing data is evaluated and the final product specification developed.
	1.7 P**roduct** specification is clearly and comprehensively defined.
	1.8 Final specifications are amended in response to feedback.
2. Maintain documents and records	2.1 Records are correctly maintained throughout production.
	2.2 Records are completed within required timescales and are easily accessible to persons approved for access.
	2.3 Signatures are obtained on documents to indicate initial agreement and approved changes to specifications.

		2.5 Records are stored according to customer and organizational requirements.
3.	Work with others	3.1 **Appropriate persons** are consulted to ensure that relevant information has been documented.
		3.2 Relevant personnel are provided with final working documents.

RANGE STATEMENT

All range statements must be assessed:

A. Information:

(i) Graphic
(ii) Written
(iii) Electronic

B Product

(i) Style
(ii) Fabric type
(iii) Make-up

C. Appropriate Persons:

(i) Colleagues
(ii) Customers
(iii) Managers

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What are the recording systems and requirements.
2. What are the sources of working and recording documents.
3. What is the type and content of information required within the working documents.
4. What is appropriate garment technology terminology and how it should be used.
5. How to present graphic, electronic and written information.
6. What are the production, quality assurance, control checks and safety requirements.
7. Why security and confidentiality of information is important.
8. What is the impact of legislative requirements on design and technical specifications.
9. What are the import and export legislative requirements for part and finished goods.
10. What are the specifications, quality standards and finishing requirements.
11. How to interpret test reports and pre-production documents.
12. What are the material specifications, handling, care and labelling requirements.
13. How to identify the pattern pieces appropriate for the product.
14. What are the construction and properties of materials and components.
15. What are the principles and methods of production, garment construction and costing.
16. What are the characteristics relating to the suitability of materials and components for the proposed production methods.
17. What are the requirements and sequences for pre-production and production.
18. What is the manufacturing and machine capability.
19. What are the limits of own personal responsibility.
20. How and to whom problems should be reported outside own area of responsibility.
21. Why effective communication with colleagues and customers is important.
22. What are the lines of communication, authority and reporting procedures.

23. What are the organization's procedures, rules, codes and guidelines.

24. What are the organization's quality standards.

25. What is the importance of complying with instructions.

26. What are the equipment operating procedures and manufacturer's instructions.

27. What are the statutory responsibilities under health, safety and environmental legislation and regulations.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge on **more than one occasion**. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence of competence may be obtained through a variety of methods including:

- Observation
- Written/oral questioning
- Witness testimony
- Written evidence (work records, reports)
- Simulations

Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit can be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing applications, codes, standards, manuals and reference materials.

Simulation **should not be used,** except in exceptional circumstances where natural work evidence is unlikely to occur.

U63403

Create digitized patterns using computer-aided manufacturing (CAM) systems

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to create patterns using computer-aided manufacturing (CAM) systems for clothing, footwear and accessories. It involves liaising with customers to confirm the design of the pattern, types of materials to be used, quantity and sizes required and the creation of digitized patterns using CAM systems.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Agree the design features	1.1 Main **design features** for the **patterns** are confirmed in consultation with relevant persons.
	1.2 Information relating to the pattern specifications for the design is obtained.
	1.3 Information required to allow the design of **patterns** using CAM systems is sourced.
2. Prepare and produce design	2.1 Work area is made free from **hazards**.
	2.2 Agreed design is digitized into the standard shape and size and prototype produced.
	2.3 Changes and amendments that need to be made to the pattern after prototype are confirmed.
	2.4 Adjustments are made to the pattern to compensate for problems that have been identified.
	2.5 Pattern is recreated in sections based on the agreed design.
	2.6 Stitch markers and other information is available for production to take the pattern forward.

		2.7 Relevant technical specifications for the agreed design is prepared and made available to **others**.
3.	Record and store information	3.1 CAM system is safely and correctly shut down in accordance with organizational instructions.
		3.2 Confirmation is obtained of compliance with given instructions. Written instructions are complied with.
		3.3 Forms, records and other documentation are correctly and accurately completed.
		3.4 Work is performed in accordance with legal requirements, standards, regulations, procedures, policies**,** health and safety requirements and professional codes.

RANGE STATEMENT

All range statements must be assessed:

A. Design Features:

(i) Sizes
(ii) Shapes

B. Patterns:

(i) 2-D patterns
(ii) 3-D patterns (3-D modelling)

C. Hazards

(i) Hazards relating to materials
(ii) Hazards relating to equipment
(iii) Hazards relating to people

D. Others:

(i) Colleagues
(ii) Customers
(iii) Managers

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What are the principles of pattern cutting and grading.
2. What is the importance of pattern trials.
3. What are the principles of CAM systems.
4. What are the benefits of pattern standardization in relation to CAM systems.
5. What are the main pattern creation capabilities of the CAM system.
6. How to digitize patterns and ensure optimum shape and sizing.
7. What is the main information required to use digitizing systems.
8. What is the required information about the last style, quantity and size ratio.
9. How to start, operate and close down the CAM system.
10. Why it is important to record information clearly about alterations and amendments required to the agreed design and pattern.
11. What is the information required by those making the factory production trial and subsequent production.
12. Why it is important to record information clearly about alterations and amendments required after the factory production trial has been inspected.
13. What are the organization's rules, codes, guidelines and standards.
14. What are the approved equipment operating procedures.
15. What are own responsibilities under safety, health and environmental regulations and legislation.
16. What are the common hazards in the workplace and workplace procedures for dealing with them.
17. What are the manufacturer's instructions for the operation of equipment being used.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge on **more than one occasion**. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence of competence may be obtained through a variety of methods including:

- Observation
- Written/oral questioning
- Witness testimony
- Written evidence (work records, reports)
- Simulations

Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit can be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing applications, codes, standards, manuals and reference materials.

Simulation **should not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

U63503 Design and produce creative digital colour artwork for print

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required for the design and production of digital artwork for print using software such as desk-top publishing, word processing, electronic page composition or graphic illustration.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Agree design specification for digital colour artwork	1.1 Proposed specification for the **printed product** is established with the customer and any other appropriate person.
	1.2 Creative or stylistic needs for the artwork are established.
	1.3 **Design tools** are agreed and used to create patterns/designs appropriate for the printing method.
	1.4 **Design specification** is proposed to the customer that meets all the requirements identified for the artwork.
	1.5 Proposals are amended in response to **feedback** from the customer and re-submitted until customer is satisfied.
	1.6 Timelines are agreed with the customer for production of the artwork.
	1.7 Accurate records are kept of the agreed design, colour and product specifications, scope of work agreed and any other relevant contractual issues.
2. Plan artwork production	2.1 Range and sequence of tasks required to produce the artwork are identified.
	2.2 Digital files to be used in the production of the artwork are identified and located.

		2.3 Suitability of the format of the digital files for use in the artwork is confirmed.
		2.4 Other **source materials** required are identified.
		2.5 Tasks are coordinated or delegated to **others** to meet agreed timescales.
3.	Produce creative digital colour artwork	3.1 Creative colour artwork that meets the agreed design specification is produced.
		3.2 Typographical elements are accurately formatted.
		3.3 Charts or tables are correctly formatted.
		3.4 Line-art or bitmap images for document use are checked.
		3.5 Colours are selected and used in line with the pantone scale.
		3.6 Colour proof is submitted to the customer.
		3.7 Digital files are saved securely.
		3.8 Work is performed in an organized and efficient manner and in accordance with industry health and safety requirements.
4.	Amend digital colour artwork	4.1 Extent of corrections, amendments and stylistic changes is assessed.
		4.2 Typographic corrections are accurately interpreted and preparation marks copied.
		4.3 Clarification or advice is sought from the customer where requirements are unclear or unable to be effected.
		4.4 Customer is informed of likely additional costs caused by making amendments and agreement sought for additional work to be completed.

4.5 Corrections and amendments are made as required by the customer and proofs submitted until artwork is approved.

4.6 Digital files are securely archived.

4.7 Finished digital artwork is submitted for printing in the required format.

4.8 Difficulties in printing the artwork are resolved with the printer.

4.9 Finished artwork is reviewed after printing and the design and digital colour evaluated.

RANGE STATEMENT

All range statements must be assessed

A. Printed Product:

(i) Textiles
(ii) Ceramics
(iii) Packaging
(iv) Books/magazines
(v) Display and point of sale material

B. Design Tools:

(i) Desktop publishing
(ii) Word processing
(iii) Electronic page composition
(iv) Graphic illustration

C. Design Specification:

(i) Size of print area
(ii) Size of print
(iii) Post-print processes
(iv) Colours to be used

D. Feedback:

Oral
Written

E. Source Materials:

(i) Photographs
(ii) Copyright
(iii) Scanned images
(iv) Sketches

F. Others:

(i) Colleagues
(ii) Managers
(iii) External sources (individuals or companies)

G. Printing:

(i) Sublimation
(ii) Heat press
(iii) Laserjet
(iv) Inkjet
(v) Rotary
(vi) Manual methods
(vii) Screen printing
(viii) Etching

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What are the legal requirements relating to printing.
2. What are the ethical issues relevant to printing.
3. What health and safety risks exist and what actions need to be taken to deal with them.
4. What are the organization's procedures and regulations in dealing with health and safety issues and your responsibilities in upholding these.
5. How customer material can safely be handled.
6. Why proper security and storage of products and files are important.
7. Who you may need to communicate with and why effective communication is important.
8. What are the workplace policies and practices.
9. How to identify and assess printing options.
10. What is the pantone scale.
11. How to properly use time and resources.
12. What is the relationship between resource usage and profitability.
13. How the operation of hardware and software are used in a creative artwork environment.
14. What are the various aspects of typography and design.
15. How to deal with digital files.
16. What are the various administrative procedures involved in designing and producing artwork.
17. What quality assurance and control systems are necessary.
18. What are the characteristics of the various materials used.
19. What are the principal types of proof and their role in the printing process.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

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(2) Methods of Assessment

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- Witness testimony
- Written evidence (work records, reports)
- Simulations

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(3) Context of Assessment

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The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing applications, codes, standards, manuals and reference materials.

Simulation **must not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

U63603

Dye materials and products

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to dye materials and products to meet given specifications, using the appropriate machinery, equipment and chemicals.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Prepare for dyeing process	1.1 Required specifications are established and confirmed through **communication** with customers.
	1.2 Product batches are correctly identified and selected.
	1.3 Materials and chemicals to be used in the process are identified and prepared according to industry standards.
	1.4 Compatibility of dye with substrate is checked.
	1.5 Sufficient support services are made available to commence processing.
	1.6 Sufficient quantities of dyes and auxiliaries from the colour mixer/weigher are obtained.
	1.7 Relevant risk control measures for handling are put in place.
	1.8 Materials are lifted and moved safely and correctly.
	1.9 Work area is free from **hazards** and obstructions, and in compliance with industry standards.
	1.10 Relevant safety equipment and **personal protective equipment** are used in line with industry standards.

2. Monitor and dye items	2.1 Appropriate dyeing process is selected, used and monitored following manufacturer's specifications.
	2.2 Start-up checks are carried out.
	2.3 Paste consistency and viscosity are checked.
	2.4 Dyes and auxiliaries are prepared and applied in the correct order.
	2.5 Items are loaded correctly depending on product type.
.	2.6 Dyeing process is started and monitored following the specifications given and organizational procedures.
	2.7 Dyed items are colour matched to customer specifications.
	2.8 Completed batch is forwarded to the next stage of the production process or to a suitable containment or storage area.
	2.9 Work is completed within agreed timelines and in accordance with organizational procedures and systems of work.
	2.10 Relevant documentation is correctly and accurately completed.
	2.11 Equipment is cleaned in preparation for dyeing the next batch.
	2.12 **Waste** is disposed of safely and correctly and in accordance with industry requirements and procedures.
3. Check for faults	3.1 **Faults** with the raw materials are identified and reported.
	3.2 Equipment **faults** are detected and reported within the limits of own responsibility.
	3.3 Dyed products are inspected and **faults** reported within the limits of own responsibility.

3.4 Faulty products are identified, marked and segregated in accordance with organizational requirements.

RANGE STATEMENT

All range statements must be assessed:

A. Communication:

(i) Oral
(ii) Non verbal
(iii) Written

B. Hazards:

(i) Hazards relating to materials
(ii) Hazards relating to equipment
(iii) Hazards relating to people

B Personal Protective Equipment:

(i) Face masks
(ii) Goggles
(iii) Overalls
(iv) Gloves
(v) Boots

C. Waste:

(i) Materials
(ii) Chemicals
(iii) Machine parts

D. Faults:

(i) Raw materials
(ii) Equipment
(iii) Finished product

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What are the various types and importance of information given in a process specification and job sheet.
2. Why it is important to recognize the different colours across the full spectrum.
3. What is the importance of good colour vision.
4. What are the implications of order size and product type on the dyeing process.
5. What are the technical considerations with different fibre and material types.
6. What are the evaluation techniques for inherent material flaws.
7. What is the importance of having sufficient raw materials and support services.
8. How to assess customer needs and meet customer specifications.
8. How levels of product stability are maintained during the dyeing process.
9. What are the various equipment settings and adjustments.
10. Why an awareness of equipment loading procedures and chemical handling procedures is necessary.
11. What are the details of the dyeing process (fabric preparation, dyeing and finishing).
12. What is the significance of the boiler for steam, use of the compressor and water softener.
13. What are the materials and chemicals used in different processes.
14. How to deal appropriately with faults in raw materials or equipment.
15. Why processed and part-processed materials, excess materials and recoverable by-products should be separated during production.
16. Why it is important to monitor the process and ensure quality requirements are met.
17. What levels of product stability are required throughout the printing process.
18. How quality control in relation to shade, handling and continuity is achieved.
19. Why general plant awareness is important.
20. What are the limits of your personal responsibility.

21. What the industry procedures and systems are for appropriate disposal of hazardous and non-hazardous waste.

22. What are the organization's rules, codes, guidelines and standards.

23. What are the organization's production targets.

24. How to communicate effectively with colleagues and customers.

25. What are the organization's quality systems and procedures.

26. What is the importance of keeping accurate records.

27. Why it is important to comply with written instructions.

28. What are the equipment operating and cleaning procedures and manufacturer's instructions.

29. How equipment preparation is done.

30. What are your own statutory responsibilities under safety, health and environmental legislation and regulations.

31. What are the reasons for conducting sample testing.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge on **more than one occasion**. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence of competence may be obtained through a variety of methods including:

- Observation
- Written/oral questioning
- Witness testimony
- Written evidence (work records, reports)
- Simulations

Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit can be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing applications, codes, standards, manuals and reference materials.

Simulation **should not be used,** except in exceptional circumstances where natural work evidence is unlikely to occur.

U63703

Print materials and sewn products

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to print designs onto materials using rotary, inkjet or screen printing techniques.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Prepare for printing	1.1 Required specifications are established and confirmed with client.
	1.2 Product batches are correctly identified and selected.
	1.3 Prepress images are prepared.
	1.4 Inks are selected in accordance with the printing method and client specifications where appropriate.
	1.5 Availability of support services to commence printing is confirmed.
	1.6 Quantities of print resources and auxiliaries are checked for sufficiency.
	1.7 Colours are mixed in accordance with artwork to pantone specifications.
	1.6 **Faults** with raw materials and equipment are identified and reported.
	1.7 Relevant risk control measures are put in place.
	1.8 **Materials** are lifted and moved safely and correctly.

		1.9 Work area is suitable, free from **hazards** and obstructions, and in compliance with industry requirements.
2.	Print and monitor items	2.1 Items are loaded correctly onto the machine.
		2.2 Consistency and viscosity are checked and colour and hue confirmed using the **appropriate method**.
		2.3 Print materials and auxiliaries are applied in the correct order using the **appropriate method**.
		2.4 Appropriate machine programme is selected and machine settings and parameters adjusted as required for printing.
		2.5 Start-up and blockage checks are carried out.
.		2.6 **Printing process** is started and monitored in line with organizational specifications and procedures.
		2.7 Completed batches are forwarded to the next stage of the production process or to a suitable containment or storage area.
		2.8 Work is completed within agreed timelines and in accordance with organizational procedures and systems of work.
		2.9 Relevant documentation is correctly and accurately completed.
		2.8 Machinery and equipment are cleaned in preparation for printing the next batch.
		2.9 **Waste** is disposed of safely and correctly and in accordance with industry requirements.
3.	Check for faults	3.1 **Faults** with the raw materials are identified and reported.
		3.2 Equipment **faults** are detected and reported within the limits of your responsibility.

3.3 Printed items are inspected and **faults** reported within the limits of own responsibility.

3.4 Faulty products are identified, marked and separated in line with organizational requirements.

RANGE STATEMENT

All range statements must be assessed:

A. Faults:

(i) Raw materials
(ii) Equipment
(iii) Finished products
(iv) Colour

B. Materials:

(i) Fabric
(ii) Sewn products
(iii) Wood
(iv) Plastic
(v) Metal
(vi) Glass

C. Hazards:

(i) Hazards relating to materials
(ii) Hazards relating to equipment
(iii) Hazards relating to people

D. Appropriate Method:

(i) Digital
(ii) Manual

E. Printing Process:

(i) Rotary technique
(ii) Inkjet/laserjet technique
(iii) Screen technique
(iv) Block printing
(v) Stencilling
(vi) Etching

F. Waste:

(i) Material
(ii) Chemicals
(iii) Machine parts

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What are the various types and importance of information given in a process specification and job sheet.
2. What is the importance of recognizing the different colours across the full spectrum.
3. What is the importance of good colour vision.
4. What are the technical considerations with different fibre and fabric types.
5. What are the evaluation techniques for inherent fabric flaws.
6. What is the importance of having sufficient raw materials and support services.
7. How to assess customer needs and meet customer specifications.
8. What are the various printing processes and techniques that can be used.
9. What is the screen mesh type and how this relates to fabric type and colour used.
10. What fixation processes are required for different dye classes.
11. How to effect quality control including shade, handling and continuity.
12. What are the implications for order size and product type on the machine set up and printing process.
13. What are the materials and chemicals used in different processes.
14. How to deal appropriately with faults in raw materials or equipment.
15. Why processed and part-processed materials, excess materials and recoverable by-products should be separated during production.
16. Why it is important to monitor the process and ensure quality requirements are met.
17. What levels of product stability are required throughout the printing process.
18. What are the various machine programmes, settings and adjustments.
19. Why an awareness of machine loading procedures and chemical handling procedures is necessary.
20. What are the limits of your own personal responsibility.

21. What are the industry procedures and systems for appropriate disposal of hazardous and non-hazardous waste.

22. What are the organization's rules, codes, guidelines and standards.

23. What are the organization's production targets.

24. How to communicate effectively with colleagues and customers.

25. What are the organization's quality systems and procedures.

26. Why it is important to keep accurate records.

27. Why it is important to comply with written instructions.

28. What are the equipment operating and cleaning procedures and machine manufacturer's instructions.

29. How machine preparation is done.

30. What are your own statutory responsibilities under safety, health and environmental legislation and regulations.

31. Why general plant awareness is important.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge on **more than one occasion**. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence of competence may be obtained through a variety of methods including:

- Observation
- Written/oral questioning
- Witness testimony
- Written evidence (work records, reports)
- Simulations

Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit can be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing applications, codes, standards, manuals and reference materials.

Simulation **must not be used,** except in exceptional circumstances where natural work evidence is unlikely to occur.

U63803	**Develop design offer and evaluate marketing opportunities**
Unit Descriptor:	This unit describes the knowledge, skills and attitudes required to identify market opportunities, industry trends, evaluate the market environment and assess the potential for developing a product design offer.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Research markets	1.1 Needs analysis is conducted to define research activities.
	1.2 Resources needed to undertake market research are identified.
	1.3 Methods to interpret market research are developed and employed.
	1.4 Various **sources of information** are used to carry out research.
	1.5 Market data is researched, assessed and relevance to own business identified.
	1.6 Opportunities to enter or influence **markets** are assessed.
	1.7 Trade policies and agreements are identified and their likely impact on marketing opportunities estimated.
	1.8 Economic and political factors are identified and analyzed for their potential impact on market opportunities.
	1.9 Market trends and developments are investigated to identify market needs relative to the business.

	1.10 New and emerging businesses and e-commerce markets are identified and opportunities to enter, shape or influence markets assessed.
2. Evaluate business opportunities	2.1 Political and financial stability and corruption risk factors for the potential market are analyzed and rated for acceptability.
	2.2 Legal and regulatory requirements and trade barriers are analyzed and rated for acceptability.
	2.3 Risk factors are related to international business economic cycles and their impact on the potential market estimated.
	2.4 Market opportunities are analyzed in terms of their likely fit with the organization's goals and capabilities.
	2.5 Opportunities are evaluated to determine their impact on current business and the customer base.
	2.6 Assessment of costs, benefits, risks and opportunities is carried out to determine the financial viability of each market opportunity.
	2.7 Probable returns on investment and potential competitors are determined.
	2.8 Marketing opportunities are described and ranked in terms of viability and likely contribution to the business.

RANGE STATEMENT

All range statements must be assessed:

A. Sources of Information:

(i) Books
(ii) Journals/periodicals/newsletters and other printed material
(iii) Databases
(iv) Internet

B. Markets:

(i) Local
(ii) Regional
(iii) International

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What is the role of design in marketing.
2. What are the international standards relating to environmental issues, human rights, labour relations and packaging.
3. What are the cross-cultural communication and negotiation styles relevant to the country or countries being considered for market entry or for further market penetration.
4. What are the relevant guidelines for e-commerce.
5. What are the key provisions of relevant legislation.
6. What are the organization's business and marketing plans, products and services.
7. What software applications are used in conducting international e-commerce.
8. What are the relevant bank restrictions and exchange control regulations for e-commerce.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge on **more than one occasion**. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence of competence may be obtained through a variety of methods including:

- Observation
- Written/oral questioning
- Witness testimony
- Written evidence (work records, reports)
- Simulations

Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit can be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing applications, codes, standards, manuals and reference materials.

Simulation **must not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

U63903 **Illustrate and produce designs**

Unit Descriptor: This unit describes the knowledge, skills and attitudes required to create apparel and interior design illustrations, using manual and computer-assisted design (CAD) systems, present concepts and produce the design that will record the style and features of the item.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Create design concept	1.1 **Concept** is created using the design brief in accordance with **design specification** provided.
	1.2 Accurate representation of the design concept is prepared.
	1.3 **Material** choices and colour options are clearly stated.
	1.4 Trim details required on the product are clearly and accurately detailed.
	1.5 Appropriate notations of specific measurements are included.
	1.6 Relevant **features** that are present within the design and input notations are indicated.
2. Develop and present design concept	2.1 Design concept is presented in accordance with customer requirements.
	2.2 Working document is developed.
	2.3 Existing files are accessed and edited to create innovative changes to current styles or concepts.
	2.4 Advanced functions of the chosen software are utilized as required.
	2.5 Advanced design presentation images are created where software functionality is available.

3. Perform work and record information	3.1 Approach to work is adapted in line with customer specifications.
	3.2 **Relevant persons** are communicated with effectively.
	3.3 Inputted data is saved in appropriate format.
	3.4 Work is carried out in an organized and efficient manner and meets organizational requirements for quality and standard.
	3.5 Work area is appropriately arranged and kept free of **hazards**.
	3.6 Safe working practices and appropriate personal conduct are observed at all times.
	3.7 Work is performed within the limits of own personal responsibility.
	3.8 Problems outside of own area of responsibility are reported to the appropriate person.
	3.9 Organizational standards, regulations, policies, procedures, professional codes and legal requirements are strictly observed.
4. Agree design features	4.1 Main design features and scope are confirmed in consultation with **relevant persons**.
	4.2 Information required to allow the design of concepts using computer-assisted design (CAD) is sourced.
	4.3 Options are discussed with **relevant persons** and the differences between them explained clearly and accurately.
	4.4 Final design features are approved by **relevant persons**.
5. Produce design	5.1 Computer hardware and software are set up and operated in accordance with supplier instructions and organizational requirements.

5.2 Appropriate software is utilized to ensure the best possible design concepts.

5.3 Images are manipulated and altered in accordance with the scope of the required design to test ideas using appropriate software.

5.4 Images are simultaneously produced manually.

5.5 Alternative designs are prepared to present a range of options suitable for production.

5.6 Final design is confirmed and agreed alterations carefully recorded.

RANGE STATEMENT

All range statements must be assessed:

A. Concept:

(i) Apparel
(ii) Interior

B. Design Specifications:

(i) Size of printing area
(ii) Colours to be used
(iii) Post-print processes

C. Materials:

(i) Fabric (natural and synthetic)
(ii) Metal
(iii) Glass
(iv) Wood

D. Features:

(i) Style features
(iii) Post-print processes

E. Relevant Persons:

(i) Colleagues
(ii) Customers
(iii) Managers

F. Hazards:

(i) Hazards relating to people
(ii) Hazards relating to equipment
(iii) Hazards relating to materials

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How to use the design package to enhance the design concept.
2. What appropriate technical language must be understood.
3. How each garment fits into a range or theme.
4. How to organize the construction of garments/items being designed and presented electronically.
5. What are the approved working practices, including use of equipment, personal conduct and arrangement of work station.
6. What are the organizational quality standards, systems and procedures.
7. How to complete and store accurate records.
8. What are the limits of your own responsibility.
9. How and to whom problems outside your own area of responsibility should be reported.
10. Why effective communication is important.
11. What are the lines of communication, authority and reporting procedures.
12. What are your own responsibilities under safety, health and environmental regulations and legislation.
13. What are the common hazards in the workplace and workplace procedures for dealing with them.
14. What are the manufacturer's instructions for the operation of equipment.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge on **more than one occasion**. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence of competence may be obtained through a variety of methods including:

- Observation
- Written/oral questioning
- Witness testimony
- Written evidence (work records, reports)
- Simulations

Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit can be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is, the candidate is not in productive work, then, an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing applications, codes, standards, manuals and reference materials.

Simulation **must not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

U64003 **Manage design services**

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to identify needs, evaluate risks, set targets and add timelines in the management of design services.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Analyze physical and financial resource requirements	1.1 Access to design materials, equipment and accommodation is reviewed.
	1.2 **Factors** likely to affect schedules are identified and contingency planning conducted.
	1.3 Income and expenditure are estimated and financial information analyzed and presented.
	1.4 Opportunities are identified and targets and timelines set.
	1.5 Design objectives and performance targets are clearly established.
	1.6 Financial constraints which may affect the outcome of the project are identified.
	1.7 Human resources required are estimated and costed.
2. Communicate design plan	2.1 Design development timetable is prepared.
	2.2 Design objectives are communicated and performance targets established.
	2.3 Staff members are motivated to achieve design objectives and performance targets and to measure own performance.
	2.4 Plans are effectively communicated to **relevant persons**.

	2.5	Feedback, advice and assistance are provided to allow performance targets to be achieved.
3. Develop and manage work schedules	3.1	**Relevant persons** are informed and consulted about human resource planning, and ideas solicited.
	3.2	Design development time is estimated and scheduled.
.	3.3	Skills, competencies and roles needed for each stage of the design process are identified.
	3.4	Personnel whose skills match the required roles are allocated in line with organizational and legal requirements.
	3.5	Work is scheduled to ensure that deadlines are met and any factors likely to affect the work taken into account.
	3.6	Suitable **external agents** are commissioned to meet any skill shortages.
	3.7	Limits of responsibility are clearly established for individuals and work groups in the organization.

RANGE STATEMENT

All range statements must be assessed:

A. Factors:

(i) Financial
(ii) Equipment
(iii) Human resources

B. Relevant Persons:

(i) Colleagues
(ii) Customers
(iii) Managers

C. External Agents:

(i) Business development consultant
(ii) Financial consultant
(iii) Skills specialist

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How to estimate expenditure and potential fee income.
2. How to analyze and present financial information.
3. How to set targets and identify opportunities.
4. How to structure and conduct interviews.
5. How to use planning tools.
6. How to set design objectives and performance targets.
7. Why and how agreements should be recorded.
8. How confidential information should be handled and stored.
9. What are the organizational rules, codes, guidelines and standards.
10. How to source information.
11. Why an awareness of relevant national and international legal and regulatory requirements and constraints is necessary.
12. What are the professional codes of practice of relevant professional bodies and organizations.
13. What are specific safety standards relating to the products.
14. What professional ethics and practices are relevant to the area of occupation.
15. What environmental legislation is relevant to the area of occupation.
16. What are the limits of personal responsibility.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge on **more than one occasion**. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence of competence may be obtained through a variety of methods including:

- Observation
- Written/oral questioning
- Witness testimony
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- Simulations

Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit can be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing applications, codes, standards, manuals and reference materials.

Simulation **must not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

U64103 **Research and produce detailed designs for textiles and materials**

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to research design information and ideas for textiles and materials that match the client brief for the project. Candidates will also be required to agree the concept with others involved in the project and to use the agreed design project as a starting point for research and the origin of ideas.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Research design information	1.1 Requirements of the client and how and when the project can be completed are determined.
	1.2 **Information** is gathered to clarify the design brief.
	1.3 **Target users** of the design are identified and their needs recorded.
	1.4 **Limitations and constraints** of the client brief are determined.
	1.5 Range and use of the textiles and/or materials to be developed are determined.
	1.6 Technical, legal and regulatory requirements for design realization are noted.
	1.7 Accuracy of information is ensured by seeking advice and assistance from **relevant persons** where necessary.
2. Identify and select information	2.1 **Information** relevant to the product and the design context is identified.
	2.2 Visual sources are explored using appropriate design media, techniques and technology.
	2.3 **Information** is selected that contributes to the development of design ideas.

		2.4 **Information** is combined in such a way that an approach to the project can be agreed.
		2.5 **Relevant contextual studies** are accurately presented.
3.	Originate and present ideas	3.1 Work is carried out independently and with **relevant persons** to originate suitable ideas.
		3.2 Ideas are originated in line with the agreed design concept by using relevant research.
		3.4 Developing ideas are clearly presented to **relevant persons** involved in the project.
		3.5 Developing ideas are discussed with decision-makers and team members.
		3.6 Effectiveness of developing ideas in meeting design objectives is evaluated.
4.	Perform work and record ideas	4.1 Information is recorded and presented in a way that fosters agreement on an approach to the project.
		4.2 Written instructions are accurately followed.
		4.3 Required forms, reports and other documentation are correctly and accurately completed.
		4.4 Effective use is made of ICT.
		4.5 Necessary calculations are accurately carried out and correctly recorded.
		4.6 Communication with colleagues is clear and effective.

RANGE STATEMENT

All range statements must be assessed:

A. Information:

(i) Paper based
(ii) Graphic

B. Target User Needs:

(i) Textiles
(ii) Size
(iii) Product
(iv) Demographics
(v) Style
(vi) Market segmentation

C. Limitations and Constraints:

(i) Cost of design work
(ii) Time
(iii) Quality
(iv) Quantity
(v) Function
(vi) Form

D. Relevant Persons:

(i) Colleagues
(ii) Customers
(iii) Managers
(iv) External sources

E. Relevant Contextual Studies:

(i) Historical
(ii) Cultural
(iii) Contemporary
(iv) Political
(v) Economic
(vi) Trend forecast

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. Why limitations and constraints of the client brief should be identified and clarified.
2. How to liaise with others and contribute to setting design objectives.
3. How to evaluate target user needs.
4. What is the purpose and function of the client brief.
5. How to use information retrieval systems.
6. What are the sources of advice on how designs can be realized and how to use them.
7. How to research, collate and present information for a design brief.
8. How the history of the product, competitive products and current design trends relate to the development of the design brief.
9. What is the context, situation or location in which the product will be used.
10. What previous commissions have been undertaken by the organization.
11. How to use design media, techniques and technology.
12. How to originate ideas.
13. How to select appropriate design media including traditional and digital media.
14. How to present initial ideas to others.
15. How to use design and presentation media, techniques and technology.
16. What are the organizational rules, codes, guidelines and standards.
17. What are the legal and regulatory requirements that impact on the design realization process.
18. How to maintain the safety of self and others.
19. What are the regulations and procedures governing fair trade and ethical standards.
20. What are the environmental standards relevant to the area of work.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge on **more than one occasion**. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence of competence may be obtained through a variety of methods including:

- Observation
- Written/oral questioning
- Witness testimony
- Written evidence (work records, reports)
- Simulations

Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit can be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing applications, codes, standards, manuals and reference materials.

Simulation **must not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

U64203 Maintain health, safety and security at work

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required for candidates to take responsibility for their own safety, health and security in the workplace. It covers using the correct procedures to prevent, control and minimize risk to self and others in the workplace.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Monitor and maintain the workplace	1.1 Potential health and safety **hazards** in the workplace are identified and corrected within the limits of own authority.
	1.2 **Hazards** which cannot be immediately rectified are reported to the relevant persons.
	1.3 Security breaches are reported to relevant persons according to organizational procedures.
	1.4 Materials and equipment are stored in line with manufacturers' and organizational requirements.
	1.5 Malfunctions in equipment are identified and corrected.
	1.6 Service malfunctions that cannot be rectified are recognized and reported.
	1.7 **Waste** and debris are safely and correctly discarded.
	1.8 Hazardous substance leaks are recognized and reported to the relevant persons according to organizational and industry requirements
	1.9 Organizational procedures for lost property are followed correctly.
	1.10 Correct handling and lifting techniques are utilized.

2.	Follow emergency procedures	2.1	Location and type of **incident** is identified.
		2.2	Appropriate action is taken in the event of an incident.
		2.3	Organizational procedures for shut down and evacuation are correctly followed.
3.	Maintain records	3.1	Forms, records, reports and other documentation are accurately completed.
		3.2	Work is carried out according to legal requirements, standards and regulations, policies and professional codes.

RANGE STATEMENT

All range statements must be assessed:

A. Hazards:

(i) Physical
(ii) Chemical
(iii) Environmental

B. Waste:

(i) Hazardous
(ii) Non-hazardous

C. Incidents:

(i) Illness
(ii) Accidents
(iii) Fires
(iv) Breaches of security

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

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

2. How to conduct yourself in an emergency situation.

3. What methods are used for making safe or reducing the danger of hazardous substances in the event of an accident.

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

5. How to handle and store hazardous substances in accordance with industry and organizational procedures.

6. How to deal with lost property.

7. What are your own responsibilities for health, safety and security in the workplace.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge on **more than one occasion**. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence of competence may be obtained through a variety of methods including:

- Observation
- Written/oral questioning
- Witness testimony
- Written evidence (work records, reports)
- Simulations

Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit can be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing applications, codes, standards, manuals and reference materials.

Simulation **must not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

U64303 Monitor, research and exploit changing trends and development

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to apply analytical and practical skills to ensure an effective design service is provided to clients, and that staff are kept up to date with developments in design, materials, techniques and technology.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Research design trends and developments	1.1 Research methodology is planned and agreed with **relevant persons**.
	1.2 **Sources of information** are identified and evaluated.
	1.3 Design trends, opportunities and market directions are evaluated.
	1.4 Social, cultural and historical trends are analyzed.
	1.5 Competing design services are reviewed and gauged.
	1.6 Research findings are collated, reviewed and verified by **relevant persons**.
2. Evaluate materials and design technology	2.1 Material types, silhouettes, properties and characteristics are exhaustively investigated.
	2.2 Material availability is researched and documented.
	2.3 Potential applications of materials for use in design projects are evaluated.
	2.4 Suitability of design technologies for use in day-to-day design work and for projects is estimated.

2.5 Changes and developments in design technology are evaluated.

2.6 Results of analysis and implications for projects and the design service are communicated to appropriate persons.

2.7 Results of materials research and implications for projects and the design service are communicated to relevant persons.

2.8 Research is used to improve the quality of the design service.

RANGE STATEMENT

All range statements must be assessed:

A. Relevant Persons:

(i) Colleagues
(ii) Customers
(iii) Technical experts
(iv) Managers

B. Sources of Information:

(i) Books/magazines
(ii) Journals
(iii) Audio-visual sources
(iv) Internet
(v) Professional discussion

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How to determine research methodologies and manage the research process.
2. What are the available design opportunities, market directions and competing design services.
3. What impact social, cultural and historical trends have on design choices.
4. What are analytical and evaluative techniques.
5. How to explore exhibitions and trade shows.
6. What information and advice needs to be sourced.
7. How to use information retrieval processes.
8. What are the organizational rules, codes, guidelines and standards.
9. What are the relevant national and international legal and regulatory requirements and constraints that pertain to your own area of work.
10. What are the relevant professional ethics and practices.
11. What are the specific safety standards relating to the products.
12. What are the environmental standards and legislation relevant to the area of work.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge on **more than one occasion**. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence of competence may be obtained through a variety of methods including:

- Observation
- Written/oral questioning
- Witness testimony
- Written evidence (work records, reports)
- Simulations

Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit can be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing applications, codes, standards, manuals and reference materials.

Simulation **must not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

U64403 **Plan and manage textile and material design realization**

Unit Descriptor: This unit describes the knowledge, skills and attitudes required to work on the realization of final design textiles and materials. It includes planning and scheduling tasks and resources and working with others to realize final design products to the required standards.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Plan and prepare designs	1.1 Constraints and skill requirements for realizing final designs are identified and agreed with **relevant persons**.
	1.2 **Resources** to realize final designs are planned and organized.
	1.3 External agents are identified to undertake aspects of the design realization.
	1.4 Schedules for realization processes are accurately prepared.
	1.5 Plans and recommendations are communicated to **relevant persons** at appropriate stages during the process.
	1.6 Accurate, relevant and complete documentation is maintained in accordance with agreed standards.
2. Manage realization	2.1 Final design realization is achieved while working effectively with others.
	2.2 Agreed terms and conditions are adhered to and appropriate changes negotiated with **relevant persons**.
	2.3 Appropriate techniques and processes are carried out safely and effectively.

2.4 Quality and progress of own work and that of others are monitored at agreed intervals.

2.5 Potential or actual problems are responded to appropriately where necessary and advice sought from **relevant persons**.

2.6 Information on progress and quality is communicated effectively to **relevant persons** at appropriate stages.

RANGE STATEMENT

All range statements must be assessed:

A. Relevant Persons:

(i) Colleagues
(ii) Customers
(iii) Design experts

B. Resources:

(i) Materials
(ii) Equipment
(iii) Skills

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What are the copyright, moral rights and intellectual property issues and legislation relevant to the industry.
2. What are the occupational safety and health requirements relevant to the work context.
3. What are the production/realization processes relating to designs in a particular industry context or design discipline.
4. How and by whom the production process is handled.
5. What are the quality assurance requirements for design concept realization applicable to the particular industry context.
6. How to carry out techniques and processes for final realization.
7. What are the design objectives and client requirements.
8. What are the final realization, production or installation methods.
9. What are the project constraints and deadlines.
10. What are the sources of information and advice on costs for design realization, external agents with suitable skills and technical requirements and constraints.
11. What are the organizational rules, codes, guidelines and standards.
12. What are the relevant regulatory requirements, environmental health and safety considerations governing the use of materials, processes and technology.
13. What are the relevant fair trade and ethical standards and practices.
14. What are the legal and regulatory requirements and constraints.
15. What are the environmental standards relevant to the area of work.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge on **more than one occasion**. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence of competence may be obtained through a variety of methods including:

- Observation
- Written/oral questioning
- Witness testimony
- Written evidence (work records, reports)
- Simulations

Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit can be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing applications, codes, standards, manuals and reference materials.

Simulation **must not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

U64503 **Maintain and improve work skills and customer service**

Unit Descriptor: This unit describes the knowledge, skills and attitudes required to maintain and improve the standard of work expected and learn new skills. It also covers applying new work methods to work activities, interacting effectively with customers and offering a high quality of service.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following
1. Maintain and improve work standards	1.1 Current work responsibilities are effectively met.
	1.2 Difficulties in maintaining work standards are reported to **appropriate persons**.
	1.3 Advice on improving **work performance** is sought from appropriate persons.
	1.4 Assistance is sought from others to improve own **skills**.
	1.5 Realistic and achievable improvements to own performance related to product quality and efficiency are identified.
2. Develop learning and skills	2.1 New **skills** and work methods are learnt.
	2.2 Relevant training is undertaken in a positive and constructive manner.
	2.3 New **skills** are utilized in work activities.
	2.4 Interaction between colleagues is constructive when learning new skills and work methods.
	2.5 Feedback from **appropriate persons** is received and utilized.

		2.6 Opportunities for future training are sought.
		2.7 Accurate records and documentation are completed and stored.
3.	Provide customer service	3.1 Correct organizational procedures are followed for interacting with **customers**.
		3.2 Relevant information is obtained about services customers require.
		3.3 Services requested and provided are clearly and accurately recorded.
		3.4 **Customers** are communicated with clearly, politely and confidently.
		3.5 Requested services are provided within agreed timeframes.
		3.6 Information given to customers is accurate, up to date and within the limits of the organizational rules on confidentiality and own authority.
		3.7 Customer satisfaction on the service provided is sought and obtained.
		3.8 Problems that cannot be resolved are referred to **appropriate persons**.
		3.9 Agreed solutions are followed through with **customers** and their satisfaction with the solutions solicited.
		3.10 A positive image of self, colleagues and the organization is presented.

RANGE STATEMENT

All range statements must be assessed:

A. Appropriate Persons:

(i) Colleagues
(ii) Line manager
(ii) Project manager

B. Work Performance:

(i) Quality of work
(ii) Productivity

C. Skills:

(i) Communication
(ii) Computer software application
(iii) Design technology
(iv) Artwork

D. Customers:

(i) Internal
(ii) External

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How to receive work instructions and specifications and interpret them accurately.
2. How to make use of the information detailed in specifications and instructions.
3. How the job description is related to the job role.
4. What are the organizational expectations.
5. What are the overall aims of working departments and practices.
7. What are appropriate sources of support to develop skills.
8.. How to make use of available training and learning opportunities.
9.. How to work constructively with others when learning.
10. How to make effective use of both positive and negative feedback.
11. How to make use of new skills and knowledge in normal work activities.
12. How departmental procedures contribute towards overall efficiency and quality.
13 What is the importance of quality and its relation to the end user/customer.
14. How to request access to further learning and training.
15. What are the limits of your own personal responsibility.
16. What is the production process and how your own work activities relate to the whole process.
17. What are the lines of communication within the organization.
18. Why effective communication with colleagues is important.
19. What is the company structure.
20 What are the organizational rules, codes and guidelines.
21. What are the organizational quality control and quality assurance standards.

22. What types of records are kept, how they are completed and the importance of keeping them accurate.

23 Why it is important to comply with written instructions.

24. What are the statutory responsibilities under health, safety and environmental legislation and regulations.

25. Why customer service is important.

26. Who are the customers to whom the organization provides goods and/or services.

27. Why presenting a positive image is important.

28. How to communicate effectively with customers.

29. How to identify communication problems and deal with them effectively.

30. What are the organizational procedures for dealing with customers.

31. What are the types of problems that may occur when communicating with customers.

32. Who are the appropriate persons to whom problems should be referred that cannot be resolved.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge on **more than one occasion**. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence of competence may be obtained through a variety of methods including:

- Observation
- Written/oral questioning
- Witness testimony
- Written evidence (work records, reports)
- Simulations

Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit can be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing applications, codes, standards, manuals and reference materials.

Simulation **must not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

U64603 **Research and develop design concepts, briefs, products and design response**

Unit Descriptor: This unit describes the knowledge, skills and attitudes required to research and develop design concepts and tailor these to meet agreed design objectives with clients. It also covers developing design briefs using information gathered, presenting artwork to customers and clarifying design opportunities and constraints likely to affect the response.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Research and evaluate information	1.1 Potential design concepts and ideas are discussed with **relevant persons**.
	1.2 Methods and objectives to be used for research are coordinated.
	1.3 Visual material, relevant information and references are identified.
	1.4 Information is analyzed and creative opportunities explored.
	1.5 Different methods are used to create original ideas and concepts.
2. Produce and present ideas and design concepts	2.1 Design ideas for clients' briefs are identified and agreed with **relevant persons**.
	2.2 Design concepts and ideas with greatest potential for success are selected.
	2.2 Concepts and ideas are judged against agreed criteria.
	2.3 Appropriate modifications are made where relevant in discussion with others.
	2.4 Concepts and ideas with greatest creative potential are selected.

		2.5 Alternative concepts and ideas are solicited and considered.
		2.6 Viability of design concepts and ideas is evaluated.
		2.7 Suitable media, techniques and technology are used to prepare the design.
		2.8 Visuals and supporting information are produced and suitably **formatted for presentation** in accordance with the requirements of the brief.
		2.9 Final design concepts and ideas are agreed and presented to **relevant persons**.
3.	Develop and establish design brief	3.1 Design development needs are identified, clarified and agreed.
		3.2 Design strategies are suggested to meet agreed design objectives.
		3.3 Opportunities and constraints are identified, **evaluated** and communicated.
		3.4 Priority tasks to meet agreed objectives are determined.
		3.5 Design brief is composed in consultation with client.
		3.6 Terms of contracts for design services are negotiated.
4.	Prepare and present finished designs	4.1 Visuals and supporting information are accurately prepared.
		4.2 Design options are presented to customer in an appropriate format.
		4.3 Final designs are approved by customer.
		4.4 Design details and amendments are clearly and accurately recorded.

RANGE STATEMENT

All range statements must be assessed:

A. Relevant Persons:

(i) Colleagues
(ii) Customers
(iii) Designers
(iv) Non-designers

B. Formatted for presentation:

(i) Visuals
(ii) 3-D displays

C. Evaluated:

(i) Qualitative
(ii) Quantitative

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How to organize predictive and creative research.
2. How to analyze design needs and opportunities.
3. How to access, collate and record visual source materials.
4. How to organize and present visual and written information to a professional standard and contribute to decision-making.
5. How to evaluate and verify research findings.
6. How to prepare and present creative design findings.
7. How to generate design concepts and ideas.
8. How to use formal elements.
9. How to interpret information for the development of concepts and ideas.
10. How to exploit materials, processes and technology in terms of creative potential, limitations and suitability for design realization.
11. How to communicate design ideas to designers and non-designers.
12. How to derive evaluation criteria and how to use these to evaluate design ideas and features.
13. How to evaluate design concepts and early ideas.
14. How to predict the creative potential of design concepts and ideas.
15. What are relevant cultural, historical and operational factors and forecasting trends.
16. What are the market directions, design trends and opportunities.
17. What are the product history and competitive products.
18. Where and how the design or product is to be used, functional and design specifications.
19. What previous commissions were undertaken by the design organization.
20. When and if the product is suitable for the market.

21. What are the regulatory, environmental, health and safety considerations governing the use of materials, processes and technology.

22. What are appropriate drawing techniques.

23. What are the client brief and design objectives.

24. What are critical and visual analysis techniques.

25. How to use qualitative and quantitative evaluation techniques.

26. What are the organizational rules, codes, guidelines and standards.

27. Why an awareness of relevant national and international legal and regulatory requirements and constraints is important.

28. What are the organizational professional ethics and practices.

29. What are the specific safety standards relating to the product.

30. What is the relevant environmental legislation.

31. Why an awareness of international product differentiation is important.

32. What are qualitative and quantitative evaluation techniques.

33. What are the performance targets relevant to specialisms.

34. How to take part in a design presentations.

35. What are the technical constraints on design development and realization.

36. How to use design and presentation media, techniques and technology.

37. What presentation formats are appropriate for visuals and 3-D displays using technology.

38. What are the signing off procedures.

39. What are the sources of advice and information on design realization.

40. What are the presentation contexts, roles and responsibilities.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge on **more than one occasion**. This evidence must come from a real working environment.

(2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence of competence may be obtained through a variety of methods including:

- Observation
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- Witness testimony
- Written evidence (work records, reports)
- Simulations

Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.

(3) Context of Assessment

This unit can be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing applications, codes, standards, manuals and reference materials.

Simulation **must not be used,** except in exceptional circumstances where natural work evidence is unlikely to occur.

Level 2 Glossary of Terms

Assessment Methods

The methods which can be used to determine competence in performance and underpinning knowledge.

Assessors

The Assessor's role is to determine whether evidence presented by a candidate for assessment within the programme meets the required standard of competence in the relevant unit or element. The Assessor needs to be competent to assess to national standards in the area under assessment.

Approved Centre

Organization/Centre approved by the TVET Council to offer full National Vocational Qualifications (NVQs).

Case Studies

In situations where it is difficult for workplace assessment to take place, case studies can offer the candidate an opportunity to demonstrate potential competence.

A case study is a description of an actual or imaginary situation presented in some detail. The way the case study is presented will vary depending upon the qualification, but the most usual methods are written, taped or filmed.

The main advantage of a case study is the amount of evidence of underpinning knowledge it can generate and the specific nature of the evidence produced.

Competence

In the context of vocational qualifications, competence means the ability to carry out prescribed activities to nationally predetermined standards in an occupation. The definition embraces cognitive, practical and behavioural skills, underpinning knowledge and understanding and the ability to react appropriately in contingency situations.

Element

An element is a description of an action, behaviour or outcome which a candidate should be able to demonstrate.

Explanation of NVQ Levels

NVQs cover five (5) levels of competence, from entry level staff (Level 1) through to senior management (Level 5).

Appendix 2

Level 2 Glossary of Terms

Level 1 – Entry Level

Recognizes competence in a range of varied work activities performed in a variety of contexts. Most work activities are simple and routine. Collaboration with others through work groups or teams may often be a requirement. Substantial supervision is required especially during the early months, evolving into more autonomy with time.

Level 2 – Skilled Occupations

Recognizes competence in a broad range of diverse work activities performed in a variety of contexts. Some of these may be complex and non-routine and involve some responsibility and autonomy. Collaboration with others through work groups or teams and the guidance of others may be required.

Level 3 – Technician and Supervisory Occupations

Recognizes competence in a broad range of complex, technical or professional work activities performed in a wide variety of contexts, with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and the allocation of resources are often a requirement. The candidate is capable of self-directed application, exhibits problem solving, planning, designing and supervisory capabilities.

Level 4 – Technical Specialist and Middle Management Occupations

Recognizes competence involving the application of a range of fundamental principles and complex techniques across a wide and unpredictable variety of contexts. It requires substantial personal autonomy and often significant responsibility for the work of others, the allocation of resources, as well as personal accountability for analysis, diagnosis, design, planning, execution and evaluation.

Level 5 – Chartered, Professional and Senior Management Occupations

Recognizes the ability to exercise personal, professional responsibility for the design, development or improvement of a product, process, system or service. It also recognizes technical and management competencies at the highest level and includes those who have occupied positions of the highest responsibility and made outstanding contributions to the promotion and practice of their occupation.

External Verifier

The External Verifier is trained and appointed by the TVET Council and is competent to approve and ensure an approved Centre's quality of provision.

Internal Verifier

The Internal Verifier acts in a supporting role for Assessors to ensure the consistent quality of assessment and competence. He/she needs to be competent to assess to national standards in the area under assessment.

Appendix 2

Level 2 Glossary of Terms

NVQ

National Vocational Qualifications (NVQs) are work-based qualifications that assess an individual's competence in a work situation and certify that the candidate can perform the work role to the standards expected in employment.

NVQs are based on national occupational standards of competence drawn up by standards-setting bodies known as Industry Lead Bodies. The standards describe the level and breadth of performance that is expected of persons working in the industry or sector covered by the NVQ.

NVQ Coordinator

This is the contact person within each approved Centre offering NVQs who has overall responsibility for the operation and administration of the NVQ system.

Observation

Observation of the candidate carrying out his/her job in the workplace is the assessment method recommended in the vast majority of units and elements. Observation of staff carrying out their duties is something that most supervisors and managers do every day.

Performance Criteria

Performance criteria indicate the requirements for the successful achievement of an element. They are descriptions of what would be expected in competent performance.

Product of Work

This could be items produced during the normal course of work, which can be used for evidence purposes such as reports, menus, promotional literature, training plans, etc.

Questioning

Questioning is one of the most appropriate ways to collect evidence to assess a candidate's underpinning knowledge and understanding.

Questioning can also be used to assess a candidate in those areas of work listed in the range which cannot be assessed by observation. Guidance on when this assessment method can be used is given in the assessment guidelines of each individual element.

As an assessment method, questioning ensures that the Assessor has all of the evidence about a candidate's performance. It also allows the Assessor to clarify situations.

Appendix 2

Level 2 Glossary of Terms

Range Statements

The range puts the element of competence into context. The range describes the range of situations to which an element and its performance criteria should be applied.

Range statements are prescriptive; therefore, each category must be assessed.

Role Plays

Role plays are simulations where the candidate is asked to act out a situation in the way he/she considers 'real' people would behave. By using role-play situations to assess a candidate, Assessors are able to collect evidence and make a judgement about how the candidate is most likely to perform. This may be necessary if the range specified includes a situation in which the candidate is unlikely to find himself/herself in the normal course of his/her work, or where the candidate needs to develop competence, before being judged competent, for example, in a disciplinary situation.

Simulations

Where possible, assessment should always be carried out by observing **natural performance** in the workplace. **Simulated performance**, however, can be used where specified to collect evidence about an aspect of the candidate's work which occurs infrequently or is potentially hazardous, for example, dealing with fires.

By designing the simulated situation, briefing the candidate and observing his/her performance, the Assessor will be able to elicit evidence which will help him/her judge how a candidate is **most likely** to perform in a real-life situation.

Supplementary Evidence

Supplementary evidence can be used to confirm and support performance evidence. Types of supplementary evidence include witness testimonies, reports, journals or diaries, records of activities, personal statements and simulation (see note in glossary).

Underpinning Knowledge

Underpinning knowledge indicates what knowledge is **essential** for a candidate to possess in order to successfully achieve an element and prove total competence.

Units

A unit of competence describes one or more than one activity which forms a significant part of a candidate's work. Units are accredited separately but, in combination, can make up a vocational qualification. There are two (2) categories of units:

Appendix 2

Level 2 Glossary of Terms

Mandatory Units: These are core to a qualification and must be completed.

Optional Units: Most qualifications require the completion of one or more optional units to achieve the qualification. Candidates must choose the required number of individual units specified in the qualification structure.

Work-based Projects

Work-based projects are a useful way for the candidate to collect evidence to support any decision made about his/her performance. They are particularly appropriate in determining the level of a candidate's underpinning knowledge and understanding where it may be insufficient to rely only on questioning or observation.

A project often involves the identification of a solution to a specific problem identified by the Assessor and/or the candidate (such as looking at ways to redress a recent drop in sales), or may be a structured programme of work built around a central situation or idea (such as the introduction of a new job rostering process).