Technical and Vocational Education and Training (TVET) Council

Occupational Standards of Competence

Apparel Manufacturing Technology

Level 3

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Qualification Overview

NVQB

in

Apparel Manufacturing Technology

Level 3

Qualification Overview

The NVQB in Apparel Manufacturing Technology is designed to train providers and employers who provide a range of manufacturing services for clients in the apparel industry. Employers can use this qualification to support employees in 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, knowledge are required for the supervision of team members, the provision of leadership and the production requirements and technologies to support apparel production. 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. They must be capable of completing self-assessments.

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 manufacturing industry sector and the fashion designing sector. These persons may include apparel technologists, self-employed designers 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, cutting garments, sewing and fashion illustration.

A03103 - APPROVED NATIONAL VOCATIONAL QUALIFICATION STRUCTURE

APPAREL MANUFACTURING TECHNOLOGY LEVEL 3

To achieve a full award, candidates must complete **all** sixteen (16) mandatory units.
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Mandatory Units (All must be completed.)		**CODES**
1.	**Construct and adapt patterns to customers' requirements**	**U58603**
1.1	Take customer measurements and assess figuration	
1.2	Produce standard size patterns	
1.3	Adapt standard size patterns	
2.	**Lay-up, mark-in and cut materials**	**U58703**
2.1	Lay-up materials and mark-in the lay	
2.2	Identify deviations and rectify faults and flaws	
2.3	Cut materials	
3.	**Produce sample garments for manufacture**	**U58803**
3.1	Read and interpret specifications	
3.2	Set up machines	
3.3	Prepare sample garments	
3.4	Produce sample garments	
4.	**Handle and measure garments**	**U58903**
4.1	Identify handling and measuring requirements	
4.2	Handle and measure garments	
5.	**Resolve quality issues and provide technical feedback**	**U59003**
5.1	Monitor quality compliance	
5.2	Resolve quality issues and problems	
5.3	Evaluate sample production	
5.4	Provide feedback	
6.	**Plan apparel production schedule**	**U59103**
6.1	Identify production requirements and constraints	
6.2	Develop and agree on plan	

Mandatory Units (All must be completed.) **CODES**

7. Produce final apparel production schedule **U59203**

7.1 Compile design and pattern requirements
7.2 Contribute to product costing
7.3 Finalize assembly sequence

8. Generate electronic patterns **U59303**

8.1 Input pattern dimensions and features into CAD/CAM
8.2 Label and save digitized pattern

9. Illustrate fashion design concept **U59403**

9.1 Create design concept
9.2 Present design concept

10. Develop and grade garment pattern **U59503**

10.1 Develop garment pattern
10.2 Grade garment pattern
10.3 Store graded patterns

11. Generate cutting lay plans **U59603**

11.1 Generate cutting lay plans
11.2 Position pattern pieces onto lay plans

12. Create garment specifications and monitor product life cycle **U59703**

12.1 Compile and input garment information
12.2 Confirm garment specification
12.3 Input product information and monitor life cycle

13. Maintain a clean and safe work area **U59803**

13.1 Keep work area clean and tidy
13.2 Maintain tools and equipment
13.3 Monitor health and safety compliance

Mandatory Units (All must be completed.)		**CODES**
14.	**Provide leadership for your team**	**U59903**
	14.1 Communicate objectives 14.2 Facilitate teamwork	
15.	**Develop and monitor operational plans**	**U60003**
	15.1 Develop operational plans 15.2 Implement and monitor operational plans	
16.	**Manage professional development and working relationships**	**U60103**
	16.1 Evaluate requirements of work role 16.2 Identify skill gaps 16.3 Develop working relationships 16.4 Monitor and maintain relationships 16.5 Gather and provide feedback	

U58603 Construct and adapt patterns to customers' requirements

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to take customer measurements and assess figuration for different types of figures.

The unit also deals with producing standard size patterns and adapting these for different sizes and garments.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Take customer measurements and assess figuration	1.1 **Correct set of measures** for garment is identified.
	1.2 Complete set of measures is taken according to organizational policies and procedures.
	1.3 Customer's figuration is assessed and recorded accurately.
	1.4 Measurements are documented accurately according to organizational procedures.
2. Produce standard size patterns	2.1 **Methods** approved by the organization for creating blocks are selected and used.
	2.2 Specific **types of blocks** are selected for garment to be constructed.
	2.3 Blocks are matched to specified size requirements and charts.
	2.4 Blocks are proportioned and styled to meet specified requirements.
	2.5 Marking, sizing and construction line information and dating are clearly shown and accurately positioned on blocks.
	2.6 Blocks are produced in the **required medium** and presented to meet requirements according to agreed schedule.

	2.6 Initial patterns are produced in the **required medium** and initial plans presented to meet requirements according to agreed schedule.
	2.7 Components of blocks and patterns are accurately fitted together according to requirements.
	2.8 Patterns are stored in the specified manner to preserve quality.
3. Adapt standard size patterns	3.1 Customer figuration and style requirements are accessed from relevant work instructions.
	3.2 Adaptations are made to match customer figuration and style requirements.
	3.3 Specified construction line markings on the final pattern are correctly positioned.
	3.4 Patterns are labelled and stored in a specified manner to preserve quality in accordance with organizational standards.

RANGE STATEMENT

All range statements must be assessed:

A. Correct Set of Measures:

(i) Basic measurements, e.g. natural waist, full length, bottom width, outside leg

(ii) Figuration requirements, e.g. shoulder variations, hip variations, chest, leg shape

B. Methods:

(i) Tailoring
(ii) Manufacturing
(iii) 2-D block/computer-aided design (CAC) block

C. Types of Blocks:

(i) Stretch
(ii) Close fitting
(iii) Easy fitting
(iv) Dress block
(v) Standard coat/jacket
(vi) Pants
(vii) Skirt
(viii) Sleeve
(ix) Collars and cuffs

D. Required Medium:

(i) Lightweight cardboard or tagboard
(ii) Tissue paper
(iii) Muslin material

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What are the basic measurements for garments and where to place the tape when taking measurements?
2. How to take measurements and the sequence for taking them.
3. Why it is important to take measurements in the prescribed sequential way.
4. What are the principles and methods for
    - creating blocks
    - pattern construction and drafting for working and final patterns
    - sizing patterns
    - pattern production including the positioning of construction line markings
    - custom-made and industry patterns.
5. What are the principles and methods for
    - adapting figure variations
    - adapting style variations.
6. What are the principles and methods for changing figure proportions and what are the implications for the figuration.
7. What types of media are used for block creation.
8. What methods are used for pattern storage.
9. What are the types of markings used for patterns.
10. What are the different types of drawing equipment and materials and their uses.
11. What are standard body proportions for ladies and men.
12. What are the rules of compression and suppression.

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 may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

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

(3) Context of Assessment

This unit may 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, products and manufacturing specifications, codes, standards, manuals and reference materials.

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

U58703 Lay-up, mark-in and cut materials

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to lay-up, mark-in the lay and cut the materials for garment production.

The candidate is responsible for identifying deviations and assisting in rectifying faults and flaws.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Lay-up materials and mark-in the lay	1.1 Materials are selected to match quality and customer requirements.
	1.2 Lays are planned to meet specification requirements and industry best practices for minimizing waste.
	1.3 Pattern pieces and markings are accurately transferred to **relevant fabrics**.
2. Identify deviations and rectify faults and flaws	2.1 Deviations in materials and processes are identified precisely.
	2.2 Appropriate corrective actions are identified and used to remedy **faults and flaws**.
	2.3 Correct techniques and **work methods** are implemented to remedy **faults and flaws** to achieve specifications in accordance with agreed schedule.
	2.4 Production records and documents are completed accurately according to organizational procedures.
3. Cut materials	3.1 Cutting requirements and parts are identified to meet specifications.
	3.2 Identified parts are cut to meet quality and quantity specifications.

3.3 **Cutting equipment** is operated according to manufacturer's guidelines and regulatory health and safety practices.

3.4 Cut parts are identified and stored to preserve quality.

RANGE STATEMENT

All range statements must be assessed:

A. Relevant Fabrics:

(i) Natural fabrics e.g. cotton, linen, silk, wool
(ii) Man-made (synthetic) fabrics e.g. polyester, rayon, nylon, acrylic

B. Faults and Flaws:

(i) Fabrics
(ii) Fitting
(iii) Cutting
(iv) Assembling
(v) Pressing

C. Work Methods:

(i) Manual
(ii) Mechanical

D. Cutting Equipment:

(i) Manual e.g. scissors, shears, die cutters
(ii) Automatic e.g. rotary cutter

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How to interpret instructions from garment specifications.
2. How to select materials to match quality and customer requirements.
3. What are the different methods and types of markings.
4. What are the allowance tolerances for marking.
5. What are the principles and methods for
    - laying up different fabrics including fabrics with design content
    - lay planning and fabric utilization including those that require matching
6. What are the principles and methods for
    - garment assembly and material handling
    - garment and component cutting
7. What are the principles and methods for fitting
8. What are the principles and methods for evaluating fabric quality.
9. What are the sewing and pressing characteristics of fabrics.
10. How to identify faults and flaws in materials and processing.
11. How to diagnose and rectify faults and flaws in materials and processing.
12. Which cutting equipment to use and safe operational practices for its use.
13. How to store and handle cut parts.

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 may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

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

(3) Context of Assessment

This unit may 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 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 specifications, codes, standards, manuals and reference materials.

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

U58803 Produce sample garments for manufacture

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to read and interpret specifications for the production of sample garments.

Sample garments may vary in style, fabric and make-up.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Read and interpret specifications	1.1 Appropriate documents and information for sample garment manufacturing are acquired from authorized persons.
	1.2 Specifications are examined to confirm that the necessary **resources** are available to complete the garment.
	1.3 Other **relevant persons** are liaised and consulted with for sample garment specifications.
	1.4 Points and issues about specifications and resultant sample garments are clarified.
2. Set up machines	2.1 Most effective machines for completing sample garments are identified.
	2.2 Machines are prepared according to manufacturers' guidelines, operating procedures and occupational health and safety regulations.
	2.3 Relevant persons are informed of necessary changes according to organizational policies and guidelines.
	2.4 Suitable handling techniques and **work methods** are used to achieve specifications.

		2.5 Working practices are used that follow the occupational health and safety regulations and industry codes of practice.
		2.6 **Equipment faults** are diagnosed correctly and corrective actions implemented.
3.	Prepare sample garments	3.1 Materials, tools and equipment for specified garments are selected and confirmed for use.
		3.2 Instructions from the garment specification are interpreted correctly.
		3.3 Pattern pieces are examined and assembled to confirm that they are correct and complete according to garment specifications.
		3.4 Relevant persons are informed of deviations from the requirements and corrective actions taken.
		3.5 Pattern pieces are arranged on the material to minimize wastage and allow for cutting appropriate style and design.
		3.6 Interfacings, materials and other components are cut to meet requirements for the pattern and garment.
		3.7 Material pieces are marked using the approved method to certify that all design features are accounted for and are ready for sewing.
		3.8 Garment pieces are assembled according to specifications.
		3.9 Appropriate **sewing techniques** are identified and selected to achieve the specifications.
4.	Produce sample garments	4.1 Hand and machine sewing and **finishing procedures** and processes are efficiently and effectively completed.

4.2 Handling techniques and **work methods** suitable for achieving required outcomes are adopted.

4.4 Faults are correctly diagnosed and appropriate actions taken.

4.5 Sample garments are produced within agreed schedule to meet customers' requirements.

RANGE STATEMENT

All range statements must be assessed:

A. Resources:

(i) Materials
(ii) Machinery
(iii) Time

B. Relevant Persons:

(i) Senior supervisor
(ii) Floor manager
(iii) Quality assurance officer

C. Work Methods:

(i) Pressing at each stage of the process
(ii) Trimming at each stage of the process

D. Equipment Faults:

(i) Mechanical (motor)
(ii) Manual (threading)

E. Sewing Techniques:

(i) Hand sewing
(ii) Mechanical sewing

F. Finishing Procedures:

(i) Pressing
(ii) Trims
(iii) Facing
(iv) Seams

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. Where to acquire the relevant documents for sample garment production.
2. How to interpret instructions from garment specifications.
3. What are the principles and methods of garment construction.
4. What are the specifications of the particular garment.
5. Which are the appropriate types of fabrics for use.
6. How to analyze materials and equipment to ensure their availability for use.
7. What are the different types of machines and the set-up procedures including use of guides and aids.
8. What are the operational procedures and occupational health and safety guidelines for machinery.
9. What are the reporting procedures for the work area and the limits of own responsibility.
10. How to diagnose equipment faults and what corrective actions to take.
11. What are the principles and methods of garment and pattern assembly, handling and cutting.
12. What are the principles and methods of fitting.
13. What are the different methods and types of marking.
14. How to identify and select appropriate sewing techniques.
15. What are the different functions and how to use sewing equipment (hand and mechanical).
16. What are trims and how they are used.
17. What are interlinings and how are they used.
18. What are the different types of pressing equipment and methods of pressing.
19. What are the different thread types and how they are used.
20. What is fusing and why it is used.
21. What are appropriate handling techniques and work methods.
22. What are seams and stitches and their importance.

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 may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

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

(3) Context of Assessment

This unit may 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, products and manufacturing specifications, codes, standards, manuals and reference materials.

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

U58903 Handle and measure garments

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to identify the handling and measuring requirements for different garments.

Sample garments may vary in style, fabric and make-up.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Identify handling and measuring requirements	1.1 Specifications are checked with **relevant persons** to identify handling and measuring requirements.
	1.2 Measurements to be taken and how to complete them are confirmed.
	1.3 Specialist equipment needed for material is identified and sourced according to workplace procedures.
	1.4 Points and issues arising from handling and measuring requirements are checked and clarified.
2. Handle and measure garments	2.1 Garments are handled according to specifications.
	2.2 **Problems** handling fabric in production are identified.
	2.3 Garments and relevant parts are measured during the various **production phases** and according to garment specification.
	2.4 Garments are checked and measurements compared throughout the process.
	2.5 Measurements that are deviations from the specification are documented according to workplace procedures.

2.6 Problems, deviations and necessary changes arising from handling and measuring are **communicated** to **relevant persons**.

RANGE STATEMENT

All range statements must be assessed:

A. Relevant Persons:

(i) Senior supervisor
(ii) Floor manager
(iii) Quality assurance officer

B. **Problems:**

(i) Stitches
(ii) Over-pressing
(iii) Over-handling
(iv) Cutting

C. Production Phases:

(i) Before
(ii) During
(iii) After
(iv) Finished product and samples
(v) Packaging

D. Communicated:

(i) Written
(ii) Verbal
(iii) Electronic

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What are the principles and methods of garment construction.
2. What are the specifications of the garment and how they are used.
3. How to identify the handling and measuring requirements of the specification.
4. What are the customer and organizational requirements.
5. How to identify and source special equipment needed for specific materials.
6. How to choose and use handling and measuring equipment.
7. How to take correct measurements and make calculations to meet specifications.
8. What are the handling requirements of various types of fabrics.
9. How to take measurements and compare them against specifications during production phases.
10. How to document measurements that are deviations from the specifications.
11. How to complete documents accurately and where records are stored.
12. What are the methods of communication permitted by the organization.
13. How and whom to communicate problems, deviations and necessary changes from handling and measuring requirements.
14. What are the approved reporting procedures.

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 may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

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

(3) Context of Assessment

This unit may 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, products and manufacturing specifications, codes, standards, manuals and reference materials.

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

U59003 Resolve quality issues and provide technical feedback

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to monitor quality compliance and provide technical feedback on sample production. It also deals with evaluating sample production and outcomes for full production.

Sample garments may vary in style, fabric and make-up.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Monitor quality compliance	1.1 Quality monitoring requirements for sample production are checked and confirmed for compliance with organizational policies and procedures.
	1.2 Identified **quality issues** are clarified according to organizational procedures.
	1.3 Technical and quality standards are maintained through communication with quality control personnel.
	1.4 Deviations are documented according to workplace procedures.
2. Resolve quality issues and problems	2.1 **Quality issues** are identified and corrective actions applied to deviations encountered.
	2.2 **Relevant persons** are informed of modifications made and the effects on the quality of sample garments.
	2.3 Effects on future processes and practices are agreed upon by **relevant persons** based on feedback.
	2.4 Agreed changes are **reported** according to organizational policies.
3. Evaluate sample production	3.1 Products, reports and other information from sample productions are evaluated.
	3.2 Issues arising from sample production are discussed and clarified with relevant persons.

	3.3 Production needs are compared with the processes, outcomes and issues arising from sample production.
	3.4 Issues arising from comparison of sample garment to production needs are accurately documented according to organizational procedures.
4. Provide feedback	4.1 Outcomes and recommendations from the evaluation of the sample production are provided to relevant persons promptly.
	4.2 Recommendations for amendments are passed to relevant persons.
	4.3 Samples are modified to confirm adaptations are feasible for production.
	4.4 Information is provided from sample analysis to inform decisions about final production processes.

RANGE STATEMENT

All range statements must be assessed:

A. Quality Issues:

(i) Materials
(ii) Machinery
(iii) Production processes

B. Relevant Persons:

(i) Senior supervisor
(ii) Floor manager
(iii) Quality assurance officer
(iv) Designer

C. Reported:

(i) Oral
(ii) Written

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What are the quality assurance procedures and practices for sample production and full production.
2. What are the monitoring procedures for quality control/assurance and specifications for sample production.
3. How to maintain accurate and up-to-date technical information on the sample production.
4. What are the diagnostic techniques and appropriate corrective methods for quality issues.
5. How to identify deviations from specifications and their effects on the quality.
6. How to effectively communicate technical feedback to relevant persons.
7. How to evaluate products, reports and other information from sample production.
8. How to clarify issues from sample production with relevant persons.
9. How to compare and evaluate production needs with sample production processes, outcomes and issues.
10. How to document issues arising from the comparison of sample production to full production.
11. How to determine the most appropriate actions to resolve problems.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

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(2) Methods of Assessment

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

Evidence may be collected in a variety of ways including:

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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, products and manufacturing specifications, codes, standards, manuals and reference materials.

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

U59103 Plan apparel production schedule

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to schedule the production of different garments. Candidates are responsible for identifying the requirements and constraints of the production process.

Garments may vary in style, fabric and make-up.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Identify production requirements and constraints	1.1 Relevant documents for identifying specifications, requirements and constraints are acquired according to organizational procedures.
	1.2 Evaluation information from various sources and development stages are read and interpreted.
	1.3 Relevant persons from designing, sampling and pilot production are consulted and requirements and possible constraints confirmed.
	1.4 Production requirements, constraints and solutions are identified, documented and confirmed.
	1.5 **Components of the plan** are drafted.
	1.6 Components and the plan are checked to confirm that requirements of the production schedule are met.
2. Develop and agree plan	2.1 Draft plans are discussed and agreement sought with **relevant persons** according to organizational procedures.
	2.2 Final plans are developed that guarantee production requirements are met.

2.3 Production plan is agreed with relevant persons.

2.4 Written approval is sought and obtained in keeping with organizational policies from relevant persons.

RANGE STATEMENT

All range statements must be assessed:

A. Components of the Plan:

(i) Materials
(ii) Machinery
(iii) Personnel skills
(iv) Time scheduling

B. **Relevant Persons:**

(i) Manager
(ii) Designer

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How and where to acquire relevant documents for production scheduling.
2. What are the means and methods for identifying specifications, production requirements and constraints.
3. How to communicate and consult with other relevant persons about requirements and constraints.
4. What are production requirements and how they are identified.
5. What are the quality standards and requirements of production.
6. What are the principles and methods of production and garment construction.
7. How to identify and document production requirements and possible constraints.
8. What methods can be used to overcome or remedy constraints.
9. What are the components of the production plan and how to obtain approval for the final plan.
10. What are the characteristics and suitability of the materials for the proposed production methods.

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 may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

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

(3) Context of Assessment

This unit may 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, products and manufacturing specifications, codes, standards, manuals and reference materials.

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

U59203 Produce final apparel production schedule

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to compile design and pattern requirements and schedule production.

Garments may vary in style, fabric and make-up.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Compile design and pattern requirements	1.1 Quality, quantity, **types of materials** and components are agreed with **relevant persons** according to organizational procedures.
	1.2 Fabric testing reports are sourced and included in product specifications.
	1.3 Clear and accurate instructions are given for handling materials.
	1.4 Customers' product size charts and measurement instructions are verified and included in final specifications according to organizational procedures.
	1.5 **Product labelling and packing instructions** are identified and followed in compliance with customer and regulatory requirements.
2. Contribute to product costing	2.1 Material and component costs are obtained from approved suppliers.
	2.2 Accurate make-up **costings** that the meet required contribution to direct costs are produced and supplied.
	2.3 Costing breakdown for specification is agreed to by **relevant persons**.

		2.4 Costings are signed off by **relevant persons**.
3.	Finalize assembly sequence	3.1 Assembly sequence, production methods and product parts which satisfy design requirements and cost criteria are identified.
		3.2 Special features of specification are clearly described and illustrated.
		3.3 Finishing requirements are identified and described.
		3.3 Quality control information is provided to relevant persons within agreed specifications for design and customer requirements.
		3.4 Material supplies and production operations are checked with **relevant persons**.
		3.5 Assembly sequence is confirmed and **communicated** to **relevant persons**.

RANGE STATEMENT

All range statements must be assessed:

A. Types of Materials:

(i) Construction of fabric e.g. woven , knits, worsted
(ii) Design of fabric e.g. plain, pattern

B. Relevant Persons:

(i) Senior supervisor
(ii) Manager

C. Product Labelling and Packaging Instructions:

(i) International labelling requirements e.g. care instructions, use of symbols, declaration of fibre composition

(ii) Types of packages e.g. merchandise packaging, vacuum packaging, shipping requirements

D. Costings:

(i) Direct costs
(ii) Indirect costs

E. Communicated:

(i) Oral
(ii) Electronic

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What are the quality standards and finishing requirements of customers.
2. What are the agreed quantities, types of materials and components needed.
3. What are the principles and methods of fabric testing.
4. Why it is important to include fabric testing reports in product specifications.
5. How to give clear and accurate instructions for handling materials.
6. What methods are used to verify product size charts and measurements with customers.
7. What are the product labelling and packaging regulations and guidelines.
8. Who are the approved suppliers and how to obtain cost of materials and components.
9. What are the principles and methods of garment costing.
10. What are the direct and indirect methods of garment costing.
11. How to identify and confirm assembly sequence that satisfies cost criteria.
12. What methods of production and product parts are confirmed for use.
13. How to describe special features and finishing requirements of specification.
14. What are the sources and delivery times for materials.

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 may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

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

(3) Context of Assessment

This unit may 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, products and manufacturing specifications, codes, standards, manuals and reference materials.

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

U59303 Generate electronic patterns

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to generate electronic versions of paper garment patterns by digitizing pattern piece information from paper.

It involves inputting garment pattern piece dimensions and features into computer-aided design (CAD) and computer-aided manufacturing (CAM) systems.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Input pattern dimensions and features into CAD/CAM	1.1 Patterns for digitizing are selected, pattern pieces reviewed and key design features identified.
	1.2 Individual pattern pieces are positioned onto **digitizing device** and details inputted using **software** according to manufacturer's specifications.
	1.3 Industry standard pattern notations including drill holes and notches are inputted.
	1.4 Pattern on system is assessed against existing pattern.
	1.5 Pattern is evaluated to verify that shapes are correct, notches present and grain lines, nap and pattern applied correctly.
	1.6 Basic pattern **modification techniques** are used to correct any non-compliance.
2. Label and save digitized pattern	2.1 Pattern pieces are labelled and positioned according to standard operating procedures.
	2.2 Chosen **software** is used to output industry standard pattern.
	2.3 Patterns are labelled and saved according to organizational procedures.

RANGE STATEMENT

All range statements must be assessed:

A. Digitizing Device:

(i) Digitizing boards/tablet and stylus
(ii) Scanner

B. Software:

(i) Accumark
(ii) Gerber
(iii) Fashion CAD

C. Modification Techniques:

(i) Manual pattern cutting
(ii) Addition/subtraction of straight edges

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How to recognize relevant pattern pieces and interpret the displayed notations.
2. How to position individual pattern pieces onto digitizing devices.
3. What are the approved organizational methods for inputting information and notations.
4. How to differentiate between symbols and notations e.g. notches, drill holes, grain lines, darts and others.
5. How to evaluate patterns to confirm all information is present.
6. What are the techniques used to modify basic patterns.
7. How to label pattern pieces to ensure that they are correctly aligned.
8. What is the assembly process for products.
9. How to use chosen software to output standard garment pattern.
10. What are the organizational procedures for storing data.

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 may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

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

(3) Context of Assessment

This unit may 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, products and manufacturing specifications, codes, standards, manuals and reference materials.

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

U59403 Illustrate fashion design concept

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to create computer-aided design (CAD) fashion illustrations of new garment designs.

These designs show and record the style and features of the garment. Garments may vary in fabric and make-up.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Create design concept	1.1 Design brief is obtained and used to create garment concept.
	1.2 Vector based drawing programmes and computer aided design **software** are used to create the design sketches in the virtual domain.
	1.3 Accurate presentation of design concept including technical details is presented to **relevant persons**.
	1.4 Descriptions of design concept features, fabric and trim details are clearly outlined.
	1.5 **Notations** relevant to all features are confirmed as listed.
2. Present design concept	2.1 Design concept is presented in keeping with customers' requirements and organizational policy.
	2.2 Advanced functions of chosen software are used to create presentation images as necessary.
	2.3 Design concept is labelled appropriately and saved according to organizational procedures.

2.4 Design concept is **communicated** to **relevant persons** in keeping with organizational guidelines.

RANGE STATEMENT

All range statements must be assessed:

A. Software:

(i) Accumark
(ii) Gerber
(iii) Fashion CAD

B. Relevant Persons:

(i) Senior supervisors
(ii) Designer

C. Notations:

(i) Style features e.g. stitching detail for collar, pocket
(ii) Fabric features e.g. type of fabric, colour options, digital swatches or colouration of garment
(iii) Trims e.g. choice of fastening (button, zip)
(iv) Specific measurements

D. Communicated:

(i) Oral
(ii) Electronic

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What are the key elements of the design brief and how these can be incorporated into the design concept.
2. How to use computer-aided design software to create design sketches.
3. How to present design illustrations electronically.
4. Which technical details to include and how these should be presented.
5. How to communicate various features of the design concept.
6. What notations are relevant for the design concept.
7. How to present the design concept using computer-aided design (CAD) or other relevant design software.
8. What are the organizational procedures for the labelling and saving of 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.

Evidence may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

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

(3) Context of Assessment

This unit may 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 specifications, codes, standards, manuals and reference materials.

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

U59503 Develop and grade garment pattern

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to alter and amend patterns stored in computer-aided design and computer-aided management (CAD/CAM) systems to create new concepts and variations of style.

The unit also deals with grading the final pattern pieces to required sizing chart details.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Develop garment pattern	1.1 Pattern block is selected and retrieved from saved CAD/CAM system files according to organizational procedures.
	1.2 Design illustration is analyzed to determine changes required to meet customer specifications.
	1.3 Pattern is modified to match required shape using appropriate **modification techniques**.
	1.4 Fabric features such as drape, stretch and shrinkage are considered during the modification process.
	1.5 Lay plan process is informed by differentiation between single and mirrored pieces.
	1.6 Completed pattern is printed for sample making according to workplace instructions.
	1.7 Patterns are modified based on resultant sample.
2. Grade garment pattern	2.1 Identified pattern is retrieved from saved CAD/CAM system file.
	2.2 Pattern grading function of the chosen **software** is prepared for use.

	2.3 Appropriate size ranges are accessed from created or existing size chart or rule table.
	2.4 Size and shape of pattern piece is graded manually using computer-aided design software according to size chart and necessary fit.
	2.5 Work is carried out according to customer specifications.
	2.6 Pattern grading techniques using chosen **software** are applied in keeping with industry standards.
3. Store graded patterns	3.1 Graded patterns are produced, labelled and stored according to organizational procedures and industry best practices.
	3.2 Graded patterns are positioned for next stage of production process and reports completed according to workplace policies.

RANGE STATEMENT

All range statements must be assessed:

A. Modification Techniques:

(i) Manual pattern cutting
(ii) Addition/subtraction of straight edges

B. Software:

(i) Accumark
(ii) Gerber
(iii) Fashion CAD

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How to label, store and retrieve saved pattern block from CAD/CAM system file.
2. How to analyze design illustration to determine changes needed.
3. What are the modification techniques and their applications.
4. How pattern components fit together.
5. What are the effects of fabric drape, stretch and shrinkage and how these should be accounted for.
6. What are the principles of and how to use the pattern grading function of chosen software.
7. Why different areas of the pattern may be graded to different proportions.
8. Why it is important to check the measurements of pattern pieces against size specifications.
9. What information is required on graded patterns according to industry standards.
10. What are the reporting procedures for the organization.

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 may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

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

(3) Context of Assessment

This unit may 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, products and manufacturing specifications, codes, standards, manuals and reference materials.

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

U59603 Generate cutting lay plans

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to generate cutting lay plans in digitized fashion software. This process takes into account any constraints and endeavours to maximize the use of the fabric.

Designs may vary in style, fabric and make-up.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Generate cutting lay plans	1.1 Graded garment pattern pieces are retrieved from saved files on software system.
	1.2 **Marker making functions** of chosen software are used to arrange pattern pieces on fabric template.
	1.3 Garment specification is checked to confirm all pattern pieces are present and **lay limits** for pattern pieces defined.
	1.4 **Rules for fabric pattern** are defined and applied.
	1.5 Components of graded pattern pieces are checked and verified for incorporation into the lay.
2. Position pattern pieces onto lay plans	2.1 Pattern pieces are positioned onto the virtual lay using accepted industry methods.
	2.2 Customer requirements are applied to lay plans and sizing ratios incorporated.
	2.3 Fabric features, nap of fabric and other properties are accommodated into lay plans according to best industry practices.
	2.4 Lay plans are checked to confirm efficient fabric utilization.

2.5 Lay plans are carried out to meet production requirements and costing criteria.

2.6 Lay plans are labelled and saved in keeping with organizational procedures.

RANGE STATEMENT

All range statements must be assessed:

A. Marker Making Functions:

(i) Manual
(ii) Computerized

B. Lay Limits:

(i) Single size
(ii) Multi-size
(iii) Limit on rotation, limit on flip
(iv) Domestic patterns
(v) Industrial patterns

C. Rules for Fabric Pattern:

(i) Nap
(ii) Grain line
(iii) Pattern connections

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How to label, store and retrieve graded garment pattern pieces from software systems.
2. What are the principles and methods of marker making.
3. How to check garment specifications to confirm all pattern pieces are present.
4. What are lay limits for pattern pieces.
5. What are the effects of fabric pattern, nap direction on lay plans.
6. How to check and confirm that all garment pieces are incorporated into lay plan.
7. What are the industry standards for lay plans.
8. How to measure fabric utilization in lay plans.

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 may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

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

(3) Context of Assessment

This unit may 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.

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

U59703 Create garment specifications and monitor product life cycle

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to create garment specifications and monitor the product life cycle using management functions of the software system.

The Product Data Management (PDM) and Product Lifecycle Management (PLM) functions of software systems are used to create specifications and monitor the product life cycle.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Compile and input garment information	1.1 Sketches, technical drawings, fabric details, trims and finishing details of the garment are checked and confirmed in keeping with organizational procedures.
	1.2 Garment information confirmed for each specification is compiled accurately and inputted promptly into the product data management (PDM) system to meet critical path deadlines.
	1.3 Results and findings from testing of garment and components are recorded in the appropriate section of the software.
	1.4 Amendments to specifications, reasons for them and authorization signature are indicated in the software system.
	1.5 Organizational policies and procedures for entering information are followed and confirmed by **relevant persons** at specific stages.
2. Confirm garment specification	2.1 Information in the software is viewed and checked to confirm all data is present.
	2.2 Garment specification is given **a tracer code label** and saved according to organizational guidelines.

		2.3 Garment **tracer code label** is provided to all relevant persons.
3.	Input product information and monitor life cycle	3.1 Tracer code label is used to retrieve specific garment specification for use in production planning process.
		3.2 Garment specification and production requirement information are inputted into **product lifecycle management** function of the software.
		3.3 Production logistics and timescales for critical supplies are entered into software system.
		3.4 Product lifecycle management function of software is utilized to provide an overview of status of garment.

RANGE STATEMENT

All range statements must be assessed:

A. Relevant Persons:

(i) Operations manager
(ii) Manager

B. Tracer Code Label:

(i) Manual
(ii) Electronic

C. Product Lifecycle Management:

(i) Siemens PLM software for fashion industry
(ii) Centric PLM software
(iii) Gerber PDM/PLM software

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How to check and confirm relevant garment information such as sketches, technical drawings and fabric details.
2. How to input garment information into the product data management function of the software system.
3. Why it is important to record the results and findings of tests conducted on garments.
4. Why amendments and reasons for them should be authorized and recorded.
5. What are the organizational policies and procedures for entering and verifying information.
6. How to retrieve and view information from the product data management function.
7. How to label and save garment specifications in the product data management function.
8. How to input information into the product lifecycle management function of the software.
9. How to retrieve and utilize information from product lifecycle management.

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 may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

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

(3) Context of Assessment

This unit may 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, products and manufacturing specifications, codes, standards, manuals and reference materials.

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

U59803 Maintain a clean and safe work area

Unit Descriptor:	This unit describes the knowledge, skills and attitudes required to maintain a clean and safe work area. This is an essential function within any organization and a culture of good housekeeping practices and proper maintenance of equipment and tools is encouraged. Candidates are provided with training and monitoring for compliance with health and safety regulations.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Keep work area clean and tidy	1.1 Work area is kept clean and free from **waste** and obstructions.
	1.2 Waste is handled and disposed of safely and according to best industry practices.
	1.3 Cleaning is carried out in accordance with procedures of the organization.
	1.4 Appropriate cleaning equipment and methods are used to clean the work area.
	1.5 Cleaning equipment is cleaned after use and stored in a safe and secure manner.
2. Maintain tools and equipment	2.1 **Tools and equipment** are checked and serviced in accordance with manufacturers' guidelines and accurate records kept up to date.
	2.2 Faults and problems with tools and equipment are identified and reported according to organizational procedures.
	2.3 Corrective measures are identified and implemented by relevant persons within the limits of own authority.

		2.4 **Tools and equipment** are stored safely and according to manufacturers' recommendations and organizational guidelines.
3.	Monitor health and safety compliance	3.1 Occupational health and safety policies and procedures which meet international regulatory requirements and obligations are developed and documented.
		3.2 Individuals are provided with health and safety and refresher training routinely to maintain currency with regulations. Individuals are provided with **personal protective equipment (PPE)** for work role and trained in the correct use.
		3.3 Individuals are monitored to confirm adherence to health and safety requirements.
		3.4 Workplace is routinely assessed for hazards and risks and corrective measures implemented.

RANGE STATEMENT

All range statements must be assessed:

A. Waste:

(i) Physical
(ii) Biological
(iii) Chemical

B. Tools and Equipment:

(i) Manual e.g. scissors, pinking shears, pattern notcher, serrated tracing wheel
(ii) Mechanical e.g. rotary cutter, sewing machine

C. Personal Protective Equipment (PPE):

(i) Head protection e.g. eye shields, hair nets, ear plugs
(ii) Body protection e.g., safety coats/jackets, overalls
(iii) Footwear e.g. safety shoes, shoe covers

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What personal protective equipment is required for work role and how to use it correctly.
2. What methods are used for monitoring compliance with standards and how to action non-compliance.
3. Which cleaning equipment and methods are used within the work area.
4. How to safely clean and store equipment.
5. What are the disposal methods for various types of waste.
6. What are the procedures for dealing with various types of waste.
7. What are the manufacturers' guidelines for servicing and maintaining equipment and tools.
8. How to identify faults and problems with tools and to whom these should be reported.
9. What are the health and safety requirements of the organization.
10. How to identify corrective measures and which are within the limits of own authority.

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 may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

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

(3) Context of Assessment

This unit may 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, products and manufacturing specifications, codes, standards, manuals and reference materials.

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

U59903 Provide leadership for your team

Unit Descriptor

This unit describes the knowledge, skills and attitudes required to effectively provide direction to team members, motivate and support them to achieve personal and team objectives.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Communicate objectives	1.1 Purpose and objectives of the team are set out and positively **communicated** to all members of the team.
	1.2 Members of the team are involved in planning how personal objectives will be achieved.
	1.3 Confirmation is sought that individuals understand how achieving personal work objectives contribute to the team's objectives.
	1.4 Team members are encouraged and supported to achieve personal, work and team objectives.
	1.5 Team members' objectives that are achieved are recognized and acknowledged.
2. Facilitate teamwork	2.1 Trust and support of the team for your leadership are won through your performance.
	2.2 Team is steered successfully through difficulties and challenges including conflict within the team.
	2.3 Creativity and innovation within the team are encouraged and recognized.

2.4 Team members are given support and advice when needed especially during periods of setback and change.

2.5 Team members are motivated to present their own ideas and their contributions listened to and acknowledged.

2.6 Team members with knowledge and expertise are encouraged to take the lead and the lead followed willingly.

2.7 Team members' activities and progress are monitored without interference.

RANGE STATEMENT

All range statements must be assessed:

A. Communicated:

(i) Written
(ii) Oral
(iii) Electronic

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. How to create a sense of common purpose.
2. How to take personal responsibility for making things happen.
3. How to encourage and support others to take autonomous decisions.
4. How to act within the limits of your own authority and how to make time available to support others.
5. How to show integrity, fairness and consistency in decision-making.
6. What are the different ways of communicating effectively with members of a team.
7. How to set SMART objectives (Specific, Measurable, Achievable, Realistic and Time-bound).
8. How to plan the achievement of team objectives and the importance of involving team members in the planning.
9. Why it is important to show team members how personal work objectives contribute to achievement of team objectives.
10. What are the different styles of leadership.
11. How to select and apply different methods of motivation, support and encouragement of team members.
12. What are the different methods that can be used to recognize the achievements of team members.
13. What are the types of difficulties and challenges including conflict within teams that may arise.
14. What are the ways of identifying and overcoming difficulties and challenges within the team.
15. Why it is important to encourage others to take the lead and what methods can be used to do this.
16. What are the benefits of and how to encourage and recognize creativity and innovation within a team.
17. What are the objectives and plans of your team and the personal work objectives of team members.
18. What are the types of support and advice that team members are likely to need.
19. How to provide the support and advice that team members need.
20. What are the standards of performance for the work of the team.

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 may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

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

(3) Context of Assessment

This unit may 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 specifications, codes, standards, manuals and reference materials.

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

U60003 Develop and monitor operational plans

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to develop, implement and monitor operational plans. These plans are evaluated and the findings and outcomes used to improve business processes.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Develop operational plans	1.1 Business goals, aims and objectives are identified to meet customers' and organizational needs.
	1.2 **Operational plans** are developed in collaboration with **relevant persons** to achieve defined goals and objectives.
	1.3 Required **resources** are identified and their availability confirmed according to organizational procedures.
	1.4 **Operational plans** and their compatibility with other related processes are established.
	1.5 Factors and constraints impacting on the achievement of plans are considered and corrective actions taken.
	1.6 Tasks, related resources and responsibilities are assigned to appropriate persons in accordance with organizational policies and procedures.
	1.7 Information is **communicated** clearly, explicitly and promptly.
2. Implement and monitor operational plans	2.1 Operational plans are implemented according to workplace instructions.

2.2 Plans are monitored and outcomes documented in accordance with workplace procedures.

2.3 Outcomes are compared to goals and objectives set.

2.4 Garments are checked and measurements compared throughout the process.

2.5 Measurements that are deviations from the specification are documented according to workplace procedures.

2.6 Problems, deviations and necessary changes arising from handling and measuring are communicated to **relevant persons**.

2.7 Feedback from process measures is used to establish and implement effective methods for process improvement.

RANGE STATEMENT

All range statements must be assessed:

A. Operational Plans:

(i) Equipment e.g. tools, machinery
(ii) Processes e.g. manual, automatic

B. Relevant Persons:

(i) Senior supervisor
(ii) Manager
(iii) Business Development Officer
(iv) Marketing consultant
(v) Internal customers

C. Resources:

(i) Materials
(ii) Equipment
(iii) Manpower

D. Communicated:

(i) Written
(ii) Oral
(iii) Electronic

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What are the goals and objectives of the organization and customers' requirements.
2. How to collaborate with others in the development of operational plans and identify required resources.
3. Which factors and constraints can impact on the achievement of operational plans.
4. How to assign tasks and roles to meet operational plan requirements.
5. What are the principles and methods of effective communication.
6. How to monitor and measure process outcomes.
7. How to use feedback from processes to make improvements.

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 may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

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

(3) Context of Assessment

This unit may 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.

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U60103 Manage professional development and working relationships

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to achieve work objectives and manage professional development.

The unit also deals with the knowledge, skills and attitudes needed to develop and maintain productive working relationships as a critical part of the team leader and supervisory role.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Evaluate requirements of work role	1.1 Current and future **requirements of the work role** to satisfy the vision and objectives of the organization are identified, documented and evaluated routinely.
	1.2 Personal work objectives are discussed and agreed with **relevant persons** according to organizational procedures.
	1.3 Performance assessment measures and timelines are confirmed with **relevant persons.**
	1.4 Performance measures are recorded and reported in keeping with organizational guidelines.
2. Identify skill gaps	2.1 Gaps between current and future requirements of the work role for knowledge, skills and attitudes are identified.
	2.2 Developmental plan to address identified gaps is discussed and agreed with **relevant persons**.
	2.3 Realistic, achievable targets for development are agreed.
	2.4 Agreement is sought for the time and **support** needed to achieve targets for developmental activities.

		2.5 Personal work objectives and developmental plans are reviewed and updated according to workplace policies.
3.	Develop working relationships	3.1 **Colleagues** and **customers**' interests, needs and expectations are recognized and acknowledged.
		3.2 Roles, responsibilities and limits of authority of **colleagues** and **customers** are recognized and respected.
		3.3 Working relationships are established with **colleagues** and **customers**.
		3.4 **Colleagues** and **customers** are provided with relevant information.
		3.5 **Colleagues** and **customers** are consulted and key decisions, priorities and concerns clearly communicated.
4.	Monitor and maintain relationships	4.1 Agreements made with **colleagues** and **customers** are fulfilled and documented according to organizational procedures.
		4.2 **Colleagues** and **customers** are advised promptly of difficulties in fulfilling agreements.
		4.3 Conflicts and disagreements are identified and corrective action(s) taken to minimize damage to work activities and working relationships.
		4.4 Effectiveness of working relationships with **colleagues** and **customers** is reviewed and areas for improvement identified and implemented.
5.	Gather and provide feedback	5.1 Feedback from **colleagues** and **relevant persons** is obtained.
		5.2 Recommendations and suggestions from feedback are incorporated into developmental plan.

5.3 Feedback is provided to **colleagues** and **customers**.

RANGE STATEMENT

All range statements must be assessed:

A. Requirements of Work Role:

(i) Skills/competencies
(ii) Knowledge
(iii) Attitudes/worker behaviours

B Relevant Persons:

(i) Manager
(ii) Human Resources Officer

C. Support:

(i) Coaching/mentoring
(ii) Academic training
(iii) Special needs

D. Customers:

(i) Internal
(ii) External

E. Colleagues:

(i) Team members
(ii) Senior supervisors

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

1. What are the requirements of your own work role and how to identify gaps.
2. What are the vision and objectives of the organization.
3. How to discuss and agree personal objectives with senior personnel.
4. What assessment methods will be used to evaluate job performance.
5. What are the organizational procedures for recording and reporting performance assessment measures.
6. How to create a developmental plan to address skill gaps.
7. How to set and agree realistic targets for developmental activities with relevant persons.
8. How feedback and recommendations can be used to inform developmental plans.
9. How to identify the needs and expectations of colleagues and customers.
10. What principles and methods are used to establish working relationships.
11. How to communicate effectively with colleagues and customers.
12. How to communicate about difficulties in fulfilling agreements.
13. What methods can be used to resolve conflict and disagreements with minimum disruption of workplace.
14. How to measure the effectiveness of working relationships.
15. How to provide relevant information, gather and give feedback to colleagues and customers.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

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(2) Methods of Assessment

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

Evidence may be collected in a variety of ways including:

- Observation
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- Written evidence
- Witness testimony
- Professional discussion

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

(3) Context of Assessment

This unit may 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.

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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).