



Australian Government

MSTGN4017 Participate in product engineering

Release: 1

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Modification History

Release 1. Unit Code and Application changed. Elements and Performance Criteria simplified with Element 1 and 2 combined and other content reordered. Foundation Skills field populated. Range of Conditions removed with relevant information moved to Knowledge Evidence. Assessment Requirements clarified with generic foundation skills statements moved to appropriate section and duplication with Performance Criteria removed. Supersedes and is equivalent to MSTGN4002 Participate in product engineering.

Application

This unit describes the skills and knowledge required to assess materials, plan method of production and make production cost estimates for textile products. This process may occur in relation to repetitive production runs, short runs and quick changes and can relate to a broad range of products including fabrics, fibres, yarns, design varieties, weaves, dyes and finishes.

This unit applies to individuals working in any textiles, clothing and footwear sector where judgement is required in planning and selecting processes for self and others to achieve production outcomes.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Competency Field

Generic

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Assess materials	1.1 Identify and follow work health and safety requirements for materials being assessed 1.2 Examine sample materials and confirm structure based on properties identified 1.3 Identify and review available information about materials to establish their sustainability and suitability for use 1.4 Accurately document details of structure or composition to inform production planning
2. Plan method of	2.1 Evaluate outcomes of material assessment and identify options for

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
production	efficient and effective production 2.2 Examine existing resources, machines, production techniques and scheduling arrangements in relation to the production requirements 2.3 Identify potential requirements for production change in accordance with workplace procedures 2.4 Document options and recommendations in accordance with workplace procedures
3. Prepare cost estimates and maintain records	3.1 Identify material requirements and economical batch sizes 3.2 Identify labour and machine hours and other statistics required to develop estimates 3.3 Estimate and document all costs in accordance with workplace practices 3.4 Maintain production planning records and prepare reports in accordance with workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

- Reading skills to interpret detailed technical production and materials information
- Writing skills to integrate information from a range of sources and use logical structure in drafting options and recommendations
- Numeracy skills to make estimates and complete diverse calculations to establish costings.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Supersedes and is equivalent to MSTGN4002 Participate in product engineering.

Links

Companion Volume implementation guides are found in VET Net – -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a203ec5c-de7d-406b-b3e1-8f1a9b76e92e>

Assessment Requirements for MSTGN4017 Participate in product engineering

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- assess materials, plan method of production and make production cost estimates for two different textile products.
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- safe work practices and procedures and use of personal protective equipment for different types of textile materials
- textile materials commonly used in industry sector, including structure, properties and sustainability features
- textile production machines and their capabilities
- methods of production and their advantages and disadvantages, including:
 - just in time
 - value-added modelling
 - quick response
 - quality circles
 - team processes
 - benchmarking
- costing procedures for:
 - materials
 - economical batch hours
 - labour
 - machine hours
 - textile production and quality assurance processes
- recording and reporting practices.

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Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - textile materials for assessment
 - textile production facility and equipment
 - workplace procedures.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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