



Australian Government

MSTTD5003 Design and produce woven products

Release: 1

MSTTD5003 Design and produce woven products

Modification History

Release 1. Supersedes and is equivalent to LMTTD5003A Design and produce woven products

Application

This unit of competency covers the skills and knowledge required to develop designs and produce woven products to meet a specified design brief.

This unit of competency applies to interpreting and analysing a design brief and developing a design for woven products, such as garments, textile products or accessories, and fabrics.

The design brief may be determined by a client, trainer or supervisor and may be applied to a particular context within the textile industry. The design and subsequent calculations and analyses may be undertaken manually or by using computer-aided design (CAD) programs.

Work may be conducted in small to large scale enterprises and may involve individual and team activities.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

MSTTD4003 Produce woven textile samples

Competency Field

Textile design and development

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Determine job requirements

- | | |
|-----|--|
| 1.1 | Follow standard operating procedures (SOPs) |
| 1.2 | Comply with work health and safety (WHS) requirements at all times |

		1.3	Use appropriate personal protective equipment (PPE) in accordance with SOPs
		1.4	Identify job requirements from specifications, drawings, job sheets or work instructions
2	Prepare to design and produce woven products	2.1	Interpret design requirements and specifications from brief and analyse elements of design
		2.2	Develop design to meet design brief and in line with principles of design and product purpose
		2.3	Use communication tools to present woven design for feedback
		2.4	Respond to feedback, adjust design accordingly and confirm design for production
		2.5	Plan production of woven design sample
3	Produce woven design sample	3.1	Set up workstation, tools and equipment according to specifications
		3.2	Check yarns to be woven against quality standards
		3.3	Undertake weaving techniques to meet design specifications for sample and according to workplace procedures
		3.4	Check woven sample to ensure quality standards are met, including testing for accuracy of pattern repeat, colour or placement and yarn suitability
4	Evaluate design and production processes	4.1	Assess woven sample against design specifications, pattern and design brief
		4.2	Identify weaving faults and recognise design or production problems
		4.3	Analyse design and evaluate to identify opportunities for improvement
		4.4	Evaluate production process to identify opportunities for improvement

4.5 Document process and improvements

Foundation Skills

This section describes those required skills (language, literacy and numeracy) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Workplace procedures include one or more of the following:

- requirements prescribed by legislation, awards, agreements and conditions of employment
- SOPs
- work instructions
- PPE
- oral, written and visual communication
- quality practices, including responsibility for maintenance of own work quality and contribution to quality improvement of team or section output
- housekeeping
- tasks related to environmental protection, waste disposal, pollution control and recycling
- WHS practices

Woven products include one or more of the following:

- garments
- textile products
- fabrics
- home furnishings
- accessories (e.g. scarves and bags)
- jacquard fabrics

Plan production of woven design sample includes:

- identifying technical aspects of production
- completing specification sheet to guide production
- undertaking calculations to determine yarn quantities
- developing pattern to achieve specifications

	• selecting and preparing materials, tools and equipment required for production
Weaving technical aspects include one or more of the following:	• balance and set requirements • density requirements • ends per inch • total number of ends • number of shafts required • number of weft colours used • number of warp colours used • conversion to peg plan
Yarns include one or more of the following:	• singles yarns • plied yarns: • wool • cotton • silk • novelty • synthetics • metallics • unspun fleece • rovings • rag strips • hand spun • ribbon • silk tops • nylon filament
Woven sample includes one or more of the following:	• complete woven product • sample weave
Weaving tools and equipment include one or more of the following:	• six and eight shaft loom • warping mills • fly shuttles • double beam looms • jacquard looms • dobby looms • counter-marche looms • draw looms

- CAD equipment

Weaving techniques include one or more of the following:

- plain weave
- twill weave
- satin or sateen weave
- double weaves
- brocade weaves
- warp faced weaves
- weft faced weaves

Analyse and evaluate design includes one or more of the following:

- skill and efficiency
- variation of warp treatments
- variation treadlings
- compatibility of finishing procedures to design function
- quality
- suitability of materials

Unit Mapping Information

Release 1. Supersedes and is equivalent to LMTTD5003A Design and produce woven products

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for MSTTD5003 Design and produce woven products

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria, and include:

- reading and following work instructions, standard operating procedures (SOPs), safe work practices
- analysing and interpreting design brief
- developing design to meet design brief and in line with principles of design and product purpose
- using communication tools to present woven design for feedback
- evaluating and modifying designs
- determining production requirements
- producing at least two (2) woven design products to meet design specifications
- using a variety of yarn types
- testing accuracy of weaving pattern
- evaluating quality and addressing design and production problems
- evaluating quality, identifying faults, addressing design and production problems and determining opportunities for improvement
- documenting process and improvements.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- elements of woven design:
 - line
 - shape and silhouette
 - colour
 - texture
 - value
- principles of design:
 - repetition
 - gradation
 - rhythm

- radiation
- harmony
- contrast
- dominance
- proportion
- balance
- unity
- characteristics of yarns
- information resources on fibres and fabrics
- computer-aided design (CAD) applications
- weaving modification techniques
- weaving loom techniques
- weaving looms and equipment
- typical fault conditions:
 - incorrect warp tension
 - broken warp threads
 - incorrect beating of weft
 - incorrect threading, tie-up, treadling of design
 - incorrect use of materials
 - incorrect use of equipment
 - holes
 - foreign matter
 - creasing
 - lines
 - runs
- fault-finding procedures
- types and styles of woven fabrics
- simple equipment maintenance techniques
- specification sheets:
 - budget
 - type of product
 - style requirements (yarns, fibres and colours)
 - application
 - timeline
 - design restrictions or conditions
 - yarn costs
 - weight and drape of fabric
 - colour ways
 - fashion trends
- communication tools:

- inspiration board
- storyboard
- design concepts
- research information
- multimedia tools
- yarn samples
- colour chips
- colour and fashion forecasting references
- illustrations
- production sketches
- quality practices
- workplace procedures
- recording and reporting practices.

Assessment Conditions

- Assessors must:
 - satisfy the assessor competency requirements that are in place at the time of the assessment, as set by the VET regulator
 - have vocational competency in designing and producing woven products, at least to the level being assessed, with relevant industry knowledge and experience.
- Assessment should occur in operational workplace situations. Where this is not possible, or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment reflecting realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.

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