



Australian Government

MSTTD5004 Design and produce experimental textiles

Release: 1

MSTTD5004 Design and produce experimental textiles

Modification History

Release 1. Supersedes and is equivalent to LMTTD5004A Design and produce experimental textiles

Application

This unit of competency covers the skills and knowledge required to apply experimental processes to design and produce original textiles in response to a design brief.

The unit of competency applies to developing creative and original design concepts using manipulation techniques to create different effects on fibres, fabrics and other materials.

The design brief may be applied to a particular context within the textile industry. The design and subsequent calculations and pattern development may be created 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

Nil

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	Develop original textile product design	2.1	Identify and analyse requirements or parameters for design and application
		2.2	Conduct research to generate and explore design ideas
		2.3	Select design concept and communication tools to present design concept to appropriate personnel for feedback
		2.4	Respond to feedback and modify design concept as required
3	Prepare for manipulation process	3.1	Identify materials and manipulation techniques to achieve desired effect
		3.2	Identify processes and technical aspects of production to achieve different manipulations
		3.3	Complete specification sheet to guide production
		3.4	Undertake calculations, as required, to determine textile and material quantities
		3.5	Source materials and select and prepare tools and equipment required for production
4	Manipulate materials to produce experimental samples	4.1	Set up workstation according to specifications for work
		4.2	Check textiles and materials to be manipulated against quality standards
		4.3	Undertake 2-D and 3-D manipulation techniques to achieve design effects for sample and according to workplace procedures
		4.4	Identify material or process faults and determine and address probable cause
5	Evaluate design	5.1	Assess manipulated textile sample against design

and production processes

- concept and specifications
- 5.2 Analyse and evaluate design to identify opportunities for improvement
- 5.3 Evaluate manipulation techniques to identify opportunities for improvement
- 5.4 Explore modifications to design or process using CAD or other design tools and communicate with appropriate personnel
- 5.5 Finalise modifications and design and document all processes 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

- Research includes one or more**
- library

of the following:

- internet
- journals
- articles
- visits to galleries and museums
- technical files
- visual diary work

Explore design ideas includes one or more of the following:

- using CAD or other design tools
- developing design concepts
- reviewing against requirements
- considering application, principles of design and elements of design

Experimental textiles include one or more of the following:

- wearable products
- garments
- accessories
- domestic textile products
- giftware
- small and large scale interior/exterior applications
- public art pieces
- commissioned objects
- conceptual pieces for exhibition
- 2-D and 3-D functional and non-functional objects
- commissioned objects

Materials include one or more of the following:

- knitted fabrics, including knit weave and patterned knits, warp knits and weft knits
- woven fabrics, including plain, twill, satin, dobby and jacquard
- non-woven textiles, such as felts, nets, braids, bonded, paper and cardboard
- raw materials
- yarns
- man-made materials
- recycled materials

Appropriate personnel include one or more of the following:

- clients
- supervisor
- trainer or mentor
- designers
- production supervisors
- colleagues and other workers
- curators
- gallery owners
- architects
- interior designers

Tools and equipment include one or more of the following:

- screens
- squeegees
- exposure unit
- printing tables or work tables
- chairs
- dye pots (hot and cold)
- hot plates
- access to wet areas
- shibori poles
- needle and thread
- cutting mats and rules
- knives, secateurs and other cutters
- power tools
- hand tools
- looms and frames
- knitting machines and accessories
- linker
- overlocker
- sewing machine
- iron
- ironing board
- printing press
- mounting and display equipment

Manipulation techniques include one or more of the following:

- crushing
- heat application
- tucking
- pleating
- shrinking
- dyeing
- off loom weaving
- weaving on made frames
- painted and printed warps
- tie dye techniques
- sculptural techniques
- beading
- embroidery
- macramé
- crochet
- folding
- cutting

- reconstruction
- assemblage
- knotting
- looping
- felt making
- basket making
- papermaking
- bookmaking

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

- skill and efficiency
- variation of manipulation effects
- quality
- suitability of materials

Unit Mapping Information

Release 1. Supersedes and is equivalent to LMTTD5004A Design and produce experimental textiles

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 MSTTD5004 Design and produce experimental textiles

Modification History

Release 1. Supersedes and is equivalent to LMTTD5004A Design and produce experimental textiles

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
- conducting research to generate and explore design ideas
- selecting design concept and communication tools to present design concept to appropriate personnel for feedback
- responding to feedback and modifying design concept as required
- determining effects of manipulating textiles and other materials
- undertaking 2-D and 3-D manipulation techniques to achieve design effects for at least two (2) samples and according to workplace procedures
- determining production requirements
- evaluating and modifying design and manipulation process
- exploring modifications to design or process using computer-aided design (CAD) or other design tools and communicating with appropriate personnel
- finalising modifications and design and documenting all processes and improvements.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- uses and performance characteristics of fibres, fabrics and other materials
- elements of design:
 - line
 - shape and silhouette
 - colour
 - texture
 - value
- principles of design:
 - repetition
 - gradation
 - rhythm

- radiation
- harmony
- contrast
- dominance
- proportion
- balance
- unity
- role of manipulation as a production tool
- effect of manipulation on textiles and materials
- tools and equipment associated with manipulating fabrics and other materials
- design tools:
 - sketches
 - illustrations
 - models
 - samples
 - fibres and fabrics
- effects of manipulation on design
- requirements of design brief:
 - purpose
 - design specifications, such as colour, yarn type, size and patterns
 - quality standards
 - budget
 - timeline
 - pattern or images
 - reproducibility
 - uniqueness
- information resources on fibres, fabrics and other materials
- 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 experimental textiles, 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.

Links

Companion Volume implementation guides are found in VETNet -

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