



Australian Government

MSTDE3003 Apply advanced digitising techniques to produce computerised embroideries

Release: 2

MSTDE3003 Apply advanced digitising techniques to produce computerised embroideries

Modification History

Release 2. Supersedes and is equivalent to MSTDE3003 Apply advanced digitising techniques to produce computerised embroideries (Release 1).

Pre-requisite unit, MSTGN2011 Identify fibres, fabrics and textiles used in the TCF industry, is **superseded by** MSTGN2013 Identify fibres, fabrics and textiles used in the TCF industry.

Release 1. Supersedes and is equivalent to LMTDE3003A Apply advanced digitising techniques to produce computerised embroideries.

Application

This unit of competency covers the skills and knowledge required to apply advanced digitising techniques to a range of items.

The unit of competency applies to advanced level digitising techniques to produce computerised embroideries.

Work involves liaison with specialist embroiderers and digitisers.

Work may be conducted in small to large scale enterprises such as operational workplace activities or home-based activities, 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

MSTDE3001 Apply hooping and fabric handling techniques

MSTDE3002 Digitise artwork for computerised embroideries

MSTGN2013 Identify fibres, fabrics and textiles used in the TCF industry

Competency Field

Digitising and computerised embroidery

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 advanced digitising techniques	2.1	Prepare materials and equipment for digitising
		2.2	Use a range of advanced stitching techniques
		2.3	Identify colour blocks and colour thread changes, and adjust to meet design specifications.
		2.4	Manually adjust stitching order and make colour changes to selected areas, as required
		2.5	Create new thread charts, modify existing thread charts and mix thread colours to meet design requirements
		2.6	Create alternative stitch-out options for different colourways, fabrics and placements
		2.7	Adjust outline nodes to create different shapes
		2.8	Use a range of advanced editing techniques to modify designs and create and enhance design effects
3	Complete embroidery sample	3.1	Select fabric, stabiliser, toppings and backings, needles, thread and hoop types and use according to the design production requirements
		3.2	Complete embroidery in an efficient manner and inspect against design specifications
		3.3	Minimise waste and dispose of according to environmental guidelines

4	Create and manage files and design libraries	4.1	Establish styles and properties for designs and fabrics
		4.2	Create thread charts and customise according to design requirements
		4.3	Create templates for different styles of work
		4.4	Define machine formats and hoops for designs
		4.5	Convert design collections, catalogue and archive according to workplace requirements

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
- 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

Australian Standards include:

- the relevant industry or Australian Standards that are current at the time this unit is being undertaken

Prepare materials and equipment includes the following:

- selecting machine format and confirming capability to meet image requirements
- manipulating file types and convert for digitising
- selecting fabric type
- selecting workspace/canvas and adjusting colour
- setting up thread palette
- determining and planning optimum digitising sequence

Advanced stitching techniques include one or more of the following:

- creating and stitching a variety of gradient patterns
- creating and stitching an embossed area
- creating texture effects using tatami offsets and pattern splits
- creating and stitching a variety of single and dual motifs
- creating and stitching a variety of stamp fill patterns
- creating and stitching a range of decorative fills and outlines according to design requirements
- creating stitch patterns with carving stamps
- creating user-defined splits according to design requirements
- creating and adjusting a stable underlay on new or existing embroidery design

Optimum digitising sequence includes the following:

- minimising registration problems caused by fabric distortion
- planning colour sequence

Stamp fill patterns include one or more of the following:

- existing (pre-programmed)
- individually created
- placement
- size
- direction
- repetition
- spacing
- layout

Files and design libraries include one or more of the following:

- styles and properties for designs and fabrics
- thread charts
- templates for different styles of work
- machine formats and hoops for designs
- catalogue of design collections

Unit Mapping Information

Release 2. Supersedes and is equivalent to MSTDE3003 Apply advanced digitising techniques to produce computerised embroideries (Release 1).

Release 1. Supersedes and is equivalent to LMTDE3003A Apply advanced digitising techniques to produce computerised embroideries.

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 MSTDE3003 Apply advanced digitising techniques to produce computerised embroideries

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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 and other reference material
- applying relevant standards
- preparing, converting and editing images for digitising
- creating alternative stitch-out options for different colour ways, fabrics and placements
- using a range of advanced editing techniques to modify designs and create and enhance design effects
- introducing texture techniques
- demonstrating ability in advanced digitising techniques through production of at least five (5) embroidery pieces, according to specifications
- creating design library by saving and filing images, templates and design catalogues according to the workplace procedures and archive requirements.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- relevant Australian Standards
- a range of machines: microprocessor or computer control
- embroidery machines: domestic (single or multi-needle) or commercial (single or multi-head) machines
- basic sewing machine operations
- software functionality
- computer basic operations
- computer navigation to access and manipulate an image
- suitability of images to be digitised and limitations of software
- artwork sources

- access to embroidery designs
- advanced editing techniques:
 - adding and adjusting stitch angles
 - smoothing object outlines
 - converting between embroidery objects
 - reinforcing outlines
 - removing unwanted underlying stitching
 - creating outlines and fill holes
 - editing stitches
 - editing machine functions
 - creating manual stitching
 - digitising boring holes
 - adding stitches
 - feather stitching, such as:
 - positive stitch length
 - negative stitch length
 - side A
 - side B
 - pre-programmed patterns
 - use of customised patterns
 - reshaping, cutting, splitting and breaking design objects
- gradient:
 - single colour with a variety of:
 - density settings
 - stitch directions
 - dual and multi-colour with varying:
 - density settings
 - stitch directions
 - stitch types
- hooping techniques
- hooping accessories
- fabric types and properties:
 - woven
 - non-woven
 - knits
 - lightweight
 - heavyweight
- hoop types and uses:
 - tubular
 - sash

- screw
- cap
- square
- round
- spring
- needle types and uses:
 - standard
 - metalfil
 - embroidery eye
 - stretch
- thread types:
 - polyester
 - metallic
 - rayon
 - cotton
- stabilisers, toppings and backings:
 - water soluble
 - tear away
 - iron on
 - cut away
 - varying weights
- stable underlay:
 - edge run
 - centre run
 - tatami
 - grid
 - zigzag
 - double zigzag
- range of digitising techniques
- motifs:
 - existing (pre-programmed)
 - individually created
 - placement
 - size
 - direction
 - repetition
 - spacing
 - layout
 - managed sets
- decorative fills and outlines:

- backstitch
- stemstitch
- zigzag
- E-stitch (blanket) fills and borders
- contour
- radial
- cross-stitch
- arc
- spiral
- satin
- motif
- tatami offsets
- pattern splits
- carving stamps
- user-defined splits
- practices for recording and reporting.

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 advanced digitising techniques, 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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