



Australian Government

Department of Education, Employment and Workplace Relations

LMTDE3003A Apply advanced digitising techniques to produce computerised embroideries

Release: 1

LMTDE3003A Apply advanced digitising techniques to produce computerised embroideries

Modification History

New unit

Unit Descriptor

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

Application of the Unit

The unit applies to digitising techniques to produce computerised embroideries at an advanced level.

Work involves some discretion, initiative and judgement on the job in own work, including liaison with specialist embroiderers and digitisers.

Work may be conducted in a variety of environments, such as operational workplace activities, or home-based activities.

Work may be undertaken on a range of machines that may include microprocessor or computer controlled. Embroidery machines used in completion of this unit may include domestic (single or multi-needle) or commercial (single or multi-head) machines.

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

This unit requires the application of skills associated with planning and organising to complete digitised embroidery using associated technology. Problem-solving skills are required to determine required program features to achieve specifications and identify any machining problems. Communication skills are used to refer to specifications and complete required documentation. Self-management skills are used to ensure safe use of technology and conformance of own work to quality standards.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

LMTDE3001A	Apply hooping and fabric handling techniques
LMTDE3002A	Digitise artwork for computerised embroideries
LMTCL2003B	Identify fibres and fabrics

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Prepare for digitising	1.1	Machine format is selected and capability confirmed to meet image requirements
		1.2	File types are manipulated and converted for digitising
		1.3	Fabric type is selected
		1.4	Workspace/canvas is selected and colour adjusted to meet design specifications
		1.5	Thread palette is set up
		1.6	<i>Optimum digitising sequence</i> is determined and planned
2	Apply advanced stitching techniques	2.1	A variety of <i>gradient</i> patterns are created and stitched
		2.2	An embossed area is created and stitched
		2.3	Texture effects are created using tatami offsets and pattern splits

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| | | 2.4 | A variety of single and dual motifs are created and stitched |
| | | 2.5 | A variety of stamp fill patterns are created and stitched |
| | | 2.6 | A range of decorative fills and outlines are created and stitched according to design requirements |
| | | 2.7 | Stitch patterns are created with carving stamps |
| | | 2.8 | User-defined splits are created according to design requirements |
| | | 2.9 | A stable underlay is created and adjusted on new or existing embroidery design |
| | | 2.10 | Colour blocks and colour thread changes are identified and adjusted to meet design specifications |
| | | 2.11 | Stitching order is manually adjusted and colour changes made to selected areas, as required |
| 3 | Customise thread charts | 3.1 | New thread charts are created |
| | | 3.2 | Existing thread charts are modified to meet design requirements |
| | | 3.3 | Thread colours are mixed according to design requirements |
| 4 | Create alternative stitchout options | 4.1 | Design is adapted for different colourways |
| | | 4.2 | Design is adapted for different fabrics |
| | | 4.3 | Design is adapted for different placements |
| 5 | Modify embroidery designs using advanced editing techniques | 5.1 | Outline nodes are adjusted to create different shapes |
| | | 5.2 | A range of advanced editing techniques are used to create and enhance design effects |

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| 6 | Complete embroidery sample | <p>6.1 <i>Fabric, stabiliser, toppings and backings, needles, thread and hoop types</i> are selected and used according to the design production requirements</p> <p>6.2 Embroidery is completed in an efficient manner and inspected against design specifications</p> <p>6.3 Waste is minimised and disposed of according to environmental guidelines</p> <p>6.4 Work is conducted in accordance with <i>workplace procedures</i> and <i>occupational health and safety (OHS) practices</i></p> |
| 7 | Create and manage files and design libraries | <p>7.1 Styles and properties are established for designs and fabrics</p> <p>7.2 Thread charts are created and customised according to design requirements</p> <p>7.3 Templates are created for different styles of work</p> <p>7.4 Machine formats and hoops are defined for designs</p> <p>7.5 Files are saved and stored according to workplace requirements</p> <p>7.6 Design collections are converted, catalogued and archived according to workplace requirements</p> |

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills include:

- basic computer skills
- applying creativity to use of colour, texture, shape, balance and composition
- selecting fabric, needles, thread, stabiliser and hoop to meet design specifications
- assembling and attaching hoop
- applying hooping techniques and using hooping accessories
- applying industry efficiency standards to work
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- maintaining accurate records
- communicating within the workplace
- sequencing operations
- meeting specifications
- clarifying and checking task-related information

Required knowledge includes:

- workplace health and safety requirements for a production environment
- computer navigation to access and manipulate an image
- suitability of images to be digitised and limitations of software
- software functionality
- basic machine embroidery techniques
- types and properties of fabric
- colour, texture, shape, balance and composition theory
- hoop types
- needle types
- thread types
- stabiliser types
- workplace or store policies and procedures
- environmental aspects related to workplace and machine or equipment operation and manual handling
- OHS practices, including hazard identification and control measures
- quality practices
- workplace practices

- practices for recording and reporting

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit	It is essential that competence be demonstrated in advanced digitising techniques. The candidate must be able to: • prepare, convert and edit images • apply a range of advanced stitching techniques • determine optimal stitch sequence and alternative stitchout options • introduce texture techniques • apply advanced editing techniques to manipulate design components and embroidery effects • complete embroidery sample • save and file images, templates and design catalogues according to the workplace filing requirements. Evidence should demonstrate ability in digitising techniques through production of a range of sample pieces.
Context of and specific resources for assessment	Assessment may occur on the job or in an appropriately simulated environment and requires access to work areas, materials and equipment, and to information on workplace practices and OHS practices. The resource requirements for this unit include access to: • digitising software • embroidery machine • hoops • a range of fabrics • a range of threads • a range of needles • hooping accessories • notions.
Method of assessment	This unit may be assessed independently or in combination with other relevant units. Assessment methods may include: • written and oral questioning • completion of practical activities/tasks.
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the language and literacy

	capacity of the candidate and the work being performed.
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Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Optimum digitising sequence	Optimum digitising sequence includes: • minimising registration problems caused by fabric distortion • planning colour sequence
Gradient	Gradient may include: • single colour with a variety of: • density settings • stitch directions • dual and multi-colour with varying: • density settings • stitch directions • stitch types
Motifs	Motifs may include: • existing (pre-programmed) • individually created • placement • size • direction • repetition • spacing • layout • managed sets
Stamp fill patterns	Stamp fill patterns may include: • existing (pre-programmed) • individually created • placement • size • direction

	• repetition • spacing • layout
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Decorative fills and outlines	Decorative fills and outlines may include: • 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
Stable underlay	Stable underlay may include: • edge run • centre run • tatami • grid • zigzag • double zigzag
Advanced editing techniques	Advanced editing techniques may include: • 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
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Fabric types	Fabric types must include: • woven • non-woven • knits • lightweight • heavyweight
Stabilisers, toppings and backings	Stabilisers, toppings and backings may include: • water soluble • tear away • iron on • cut away Colours may include: • black • white Weights may vary
Needle types	Needle types may include: • standard • metalfil • embroidery eye • stretch
Threads types	Threads types may include: • polyester • metallic • rayon • cotton
Hoop types	Hoop types may include: • tubular • sash • screw • cap • square • round • spring
Workplace procedures	Workplace procedures may include: • requirements prescribed by legislation, awards, agreements and conditions of employment • standard operating procedures

	• 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
OHS practices	OHS practices must include hazard identification and control, risk assessment and implementation of risk reduction measures specific to the tasks described by this unit, and may include: • manual handling techniques • standard operating procedures • personal protective equipment • safe materials handling • taking of rest breaks • ergonomic arrangement of workplaces • following marked walkways • safe storage of equipment • housekeeping • reporting accidents and incidents • other OHS practices relevant to the job and enterprise

Unit Sector(s)

Digitising and computerised embroidery

Custom Content Section

Not applicable.