Australian Government

Department of Education, Employment and Workplace Relations

LMTTD6002A Apply electronic systems to textile design and production

Revision Number: 1

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Modification History

Not applicable.

Unit Descriptor

Unit descriptor This unit covers the skills and knowledge to apply electronic systems to textile design and production processes.

Application of the Unit

Application of the Unit

The unit applies to the development of intricate textile designs with multiple features using computer based design programs that enable technically accurate reproduction of the design. Design specifications and patterns will be calculated using appropriate software. The design brief may be provided by a client or be of own determination.

The application of this unit is according to OHS practices of the enterprise and workplace practices, which 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

This unit requires the application of skills associated with communication when interpreting design brief, researching and applying design specifications, organising information and presenting design. Problem solving, planning and organising, and initiative and enterprise are applied throughout the design development process. Technology skills are necessary for using computer aided design systems and associated equipment.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites LMTTD5007A

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Interpret ***textile design*** brief	1.1 Design brief is interpreted to determine ***design criteria***
	1.2 Trends, themes and influences in textile design are researched and evaluated in line with brief
	1.3 Complexity of design is evaluated in terms of intricacy and range of features
	1.4 Workstation is set up according to ***OHS practices***, and preliminary design concept images are created using relevant ***electronic system***
2 Develop design concept using computer aided design system	2.1 Scale and dimensional aspects of design are produced and adjustments made in line with design brief
	2.2 Design features are accurately incorporated into image using relevant software tools
	2.3 Colour palettes are developed and colour and tone effects are explored
	2.4 Colour palettes are selected and saved and computer screen and printer calibrated accordingly
	2.5 Texture and pattern effects are developed
	2.6 Other media is accessed electronically via internet or other networks and used in the creation of design concept
	2.7 Design concept features are integrated and design image is saved
3 Present and confirm design	3.1 Design image output is produced that accurately documents intricate design features, scale and dimension and incorporates design elements
	3.2 Storyboards are produced and presented using computer aided design processes
	3.3 Design is presented to client or appropriate personnel for review and modifications are made
4 Determine design specifications and machine settings	4.1 Yarn and material requirements for design draft are calculated using computer aided design system
	4.2 ***Specifications*** are confirmed in line with textile design requirements and saved
	4.3 Patterns are produced
	4.4 Machine settings are calculated and calibrated with direct interface to textile production machinery where appropriate
5 Finalise design	5.1 Design and specifications are confirmed with client or production personnel and modifications saved where necessary
	5.2 Production plans and specifications are finalised and saved
	5.3 Final design and specifications are saved as hard copy and incorporated into digital folio

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Demonstrates knowledge of:

- industry and product processes
- product and process development procedures
- principles and elements of design
- computer aided design system applications and operation
- networked computer operation
- associated computer input and output devices
- pattern making processes
- textile production processes and practices
- textile production machinery
- operation of interfaced machinery settings
- quality standards and practices
- OHS practices, including hazard identification and control measures
- workplace practices
- recording and reporting practices

Demonstrates skills to:

- interpret design brief
- accurately produce intricate designs to scale using computer aided design
- apply principles and elements of design
- use networked systems
- determine design specifications
- use computer aided design software and input and output devices
- manage computer files
- read, interpret and follow information on work specifications, standard operating procedures and work instructions, and other reference material
- maintain accurate records
- communicate within the workplace
- sequence operations
- meet specifications
- clarify and check task-related information
- carry out work according to OHS practices

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence to be considered

Demonstrates skills and knowledge to:

- apply design process to interpretation of design brief and development of design concepts
- produce intricate designs using computer aided design software
- accurately produce, modify and integrate design elements
- interact with other computing networks and media sources
- determine design specifications and machine settings
- calibrate interfaced machinery settings
- communicate with clients, design team and production personnel
- complete production plans
- manage complex computer files

Consistency in performance

Consistently applies skills and knowledge when:

- organising work
- completing tasks according to instructions
- working systematically with attention to detail
- identifying improvements and avoiding damage
- using workplace practices
- using OHS practices
- recording and reporting accidents and incidents
- assessing operational readiness of equipment
- recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions

Resource implications

Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.

Context for assessment

Assessment may occur on the job or in an appropriately simulated environment.

Interdependent assessment

This unit may be assessed independently or in combination with other relevant units.

Range Statement

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. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs if the candidate, accessibility of the item, and local industry and regional contexts.

Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
Textile design may include designs for:	• knitting • weaving • tapestry
Electronic systems include	• software programs, eg: • Prima Vision • Corel Draw • AVL Multi-Colour or Colour-In • Weavemaker Pro • Swift Weave • Design a Weave • Pro Weave • Scotweave, • Adobe Illustrator • Photoshop • Colour Matters • Nedgraphics
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
Design criteria	• styles

includes	• colours • trends • budget • purpose or function • target market • size and scale of product
Specifications include	• warp and weft settings • numbers of shafts and treadles • block and mirror selection • thread instructions • scale • yarn specifications • colour allocation • colourways • shaping • structure

Unit Sector(s)

Sector	Textile Design and Development