



Australian Government

Department of Education, Employment and Workplace Relations

LMTTF3003A Produce patterns for 3D products

Revision Number: 1

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Modification History

Not applicable.

Unit Descriptor

Unit descriptor This unit covers the skills and knowledge required to use a computer to develop three dimensional patterns for the production of complex shapes in sails and canvas products, and to perform work related calculations.

Application of the Unit

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This unit applies to the computerised development of three dimensional drawings, computerised cutting of shapes using a plotting table, calculation of material requirements and costing. Competence must be demonstrated working largely independently and being accountable for own results including carrying out assigned tasks, coordinating processes and setting and working to deadlines.

Work is conducted in operational indoor workplaces, using computers, plotters and associated software applications including spreadsheets and CAD, involving a range of canvas and sail products.

Work may be conducted in small to large scale enterprises and may involve individual and team activities. Work is performed within defined procedures under direct supervision.

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 planning and organising for the safe and effective use of computer technology and software programs to produce patterns for 3D products. This unit also requires an ability to interpret and communicate job related information, check the quality of outcomes and identify and address problems relating to own work. Self management skills are applied to ensure workplace and quality standards are achieved.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites LMTTF2007A

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 information	1.1 Preliminary drawings, sketches or diagrams provided by customer or developed by workplace are read and interpreted 1.2 Missing dimensions or other unknown features of the proposed product are determined through consultation with customer or workplace 1.3 Workplace procedures and instructions are read and interpreted
2 Access software	2.1 Computer is prepared for use 2.2 Appropriate applications are identified and opened 2.3 Required information is keyed in or transferred from other sources to initiate design or production processes
3 Develop drawings	3.1 Drawings based on customer information, are constructed using appropriate software applications 3.2 Knowledge of producing patterns processes are applied to perform required tasks 3.3 OHS practices are applied to operations
4 Mark out and cut out shapes	4.1 Shapes based on customer or enterprise information, are marked out and cut out using a plotting table and appropriate software applications 4.2 Finished work is checked for accuracy and conformance with specifications
5 Perform calculations	5.1 Spreadsheets or other appropriate software applications are used to perform complex materials calculations, financial tasks and costing 5.2 Spreadsheets are developed and applied
6 Save, document and communicate data	6.1 Data, drawings and other outputs are saved electronically and in hard copy form using established enterprise file and documentation formats 6.2 Other work related information is stored in accordance with established workplace procedures 6.3 Data and associated information are passed on to personnel responsible for further action within the organisation
7 Shut down computer	7.1 Software applications are properly exited 7.2 Computer is properly shut down and switched off

Required Skills and Knowledge

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

Demonstrates knowledge of:

- range of products and services offered by the workplace
- product construction processes
- computer hardware
- software packages used in the enterprise
- computer and plotter interfaces
- keyboard skills
- mathematical processes and formulae (eg areas, volumes)
- geometry and geometrical shapes
- principles and practices of engineering drawing
- environmental requirements of relevant industry and workplace procedures
- general industry housekeeping policies and procedures
- OHS practices, including hazard identification and control measures
- quality practices
- workplace practices
- practices for recording and reporting

Demonstrates skills to:

- identify computer hardware components
- interface with computer hardware
- load relevant software
- use relevant software
- set and input relevant data
- save and retrieve data
- set up plotting equipment
- mark out templates using plotting equipment
- interpret diagrams and drawings
- develop complicated shapes
- construct templates
- allow for material shrinkage
- make provision for rolled edges
- make provision for joins or seams
- 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

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

- 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 for assessment and evidence required to demonstrate competency in this unit

Demonstrates skills and knowledge to:

- operate a plotter to construct three dimensional drawings, mark out templates, or cut complex shapes in material
- operate a desk top or lap top computer and relevant software
- comply with all relevant safety requirements, including safe use of plotting tables for cutting out materials
- interpret work orders
- interpret customer information
- interpret specifications for components that are to form part of finished products
- document and communicate work related information

Consistently applies skills and knowledge when:

- organising work
- completing tasks
- identifying improvements
- using workplace practices
- using OHS practices
- recording and reporting accidents and incidents
- assessing operational readiness of equipment used and work processes
- recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions
- completing work systematically with attention to detail without damage to goods and equipment

Context 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.

Guidance information for 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 of 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.

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)

Sector Textile Fabrication