



Australian Government

MSTGN4009 Design production tooling

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to LMTGN4014A Design production tooling

Application

This unit of competency covers the skills and knowledge required to design tooling required for producing textile, clothing or footwear (TCF) products.

This unit of competency applies to the design of tooling to meet specific manufacturing requirements using manual or computer-aided design (CAD) systems.

This unit of competency is applicable to all sectors of the TCF industry.

Discretion and judgement may be required, for both self and others, in planning and selecting processes, procedures or outcomes. The unit of competency can refer to workplace and client initiated ideas or requests.

The size and work organisation within enterprise will determine the range of interaction with other areas.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Generic

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 for design of production tooling	2.1	Define and clarify tooling requirements
		2.2	Interpret specifications and design parameters
		2.3	Develop engineering or design specifications for tooling, including items to be produced internally or by external suppliers
		2.4	Use manual or CAD system according to workplace procedures and requirements of brief
3	Contribute to development of design or engineering specifications	3.1	Liaise with relevant personnel to confirm and prepare specification details in accordance with enterprise procedures, including required standards of construction and overall quality
		3.2	Provide tooling brief to engineering and external supplier, as required
		3.3	Liaise and communicate effectively with the component supplier and engineering area to manufacture knives or tooling
		3.4	Document procedure and maintain records

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

Relevant personnel include, but are not limited to, one or more of the following:

- prototype or sample maker
- engineering
- management
- external supplier

WHS practices

WHS practices must include hazard identification and control, risk assessment and implementation of risk reduction measures specific to the tasks described by this unit, and include one or more of the following:

- manual handling techniques
- SOPs
- PPE
- safe materials handling
- taking of rest breaks
- ergonomic arrangement of workplaces
- following marked walkways
- safe storage of equipment
- housekeeping
- reporting accidents and incidents
- other WHS practices relevant to the job and enterprise

Unit Mapping Information

Release 1. Supersedes and is equivalent to LMTGN4014A Design production tooling

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 MSTGN4009 Design production tooling

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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
- applying relevant standards
- defining requirements and developing accurate specifications
- using manual or computer-aided design (CAD) systems as required by context
- assessing technical requirements and providing tooling brief on at least two (2) occasions
- liaising and communicating effectively with relevant personnel
- applying workplace procedures
- maintaining accurate records.

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
- interpretation of specifications and the requirements of tooling design
- features of required manual or CAD design system
- roles of relevant personnel or work areas including prototype or sample maker, engineering, management and external supplier
- product construction and materials used in product production
- quality requirements
- materials used in product production
- workplace procedures and reporting processes
- work health and safety (WHS) practices, including hazard identification and control measures
- 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 production tooling, 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.
- The unit is applicable to all TCF sectors and assessment must ensure it is delivered to suit the industry it is being applied to.

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