



Australian Government

MSFFT5007 Optimise computer numerically controlled (CNC) operations

Release: 1

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Modification History

Release 1 - New unit of competency

Application

This unit of competency covers analysing production orders, production histories and machine capabilities and manipulating CNC machine control programs to optimise production performance in the furnishing industry. It requires the integration of process machines that may normally function on a stand-alone basis.

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

Pre-requisite Unit

Competency Field

Unit Sector

Furnishing Technology

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Identify optimal operating conditions	1.1 The production potential of the components of the system are identified
	1.2 Production orders and plans are analysed to identify sustained production requirements
	1.3 Integration options are identified and analysed to ascertain the optimal integration model
	1.4 Software and programming requirements to attain and sustain optimal integration are identified and recorded
2 Prepare for software installation	2.1 Program format and operational intent are accurately determined and required applications identified
	2.2 Specifications are checked for required operating

		conditions
	2.3	Program instructions are checked for compliance with specifications
	2.4	Software timers are set to specification, where required
3	Install and integrate automatic process machine control programs	3.1 Appropriate program loading technique is selected 3.2 External loading devices are correctly connected to automatic process machine control systems 3.3 Machine control system is placed in correct operational mode to accept program loading 3.4 Program is downloaded in accordance with manufacturers' recommended procedure and enterprise requirements 3.5 Checks are made during and after downloading to ensure accurate and complete data transfer 3.6 External program loading devices and connections are disconnected from process and machine control system 3.7 Integration protocols and actions are completed
4	Commission automatic process and machine control programs	4.1 Operation of the production system using the programs is observed 4.2 Outputs are checked and measured for compliance with specifications 4.3 External inputs are checked for compliance with specifications according to specified procedures 4.4 Total operation is checked for compliance with specifications where applicable 4.5 Location of program master copy storage is confirmed

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency. Detail on appropriate performance levels for each furnishing unit of competency in reading, writing, oral communication and numeracy utilising the Australian Core Skills Framework (ACSF) are provided in the Furnishing Training Package Implementation Guide.

Range of Conditions

Specifies 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. Range is restricted to essential operating conditions and any other variables essential to the work environment.

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| Unit context includes: | <ul style="list-style-type: none">• work health and safety (WHS) requirements, including legislation, building codes, material safety management systems, hazardous and dangerous goods codes, and local safe operating procedures or equivalent• work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements• work requires individuals to demonstrate conceptual and analytical ability, discretion, judgement and problem solving and is generally performed without other qualified assistance• customers are normally internal |
| Production systems include: | <ul style="list-style-type: none">• CNC machining• processing centres |
| Personal protective equipment includes: | <ul style="list-style-type: none">• that prescribed under legislation, regulations and enterprise policies and practices |
| Information and procedures include: | <ul style="list-style-type: none">• work procedures/instructions• manufacturer specifications and instructions• standard forms of workplace process and procedures• organisation work specifications and requirements• legislation, regulations and codes of practice• quality and Australian Standards and procedures |

Unit Mapping Information

Supersedes and is equivalent to LMFFT5010B Optimise CNC operations.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>