



Australian Government

MSFFT4005 Install and commission computer numerically controlled (CNC) software

Release: 1

MSFFT4005 Install and commission computer numerically controlled (CNC) software

Modification History

Release 1 - New unit of competency

Application

This unit of competency covers installing and commissioning CNC process and machine control programs in the furnishing industry.

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	Prepare for software installation	1.1	Program format and operational intent is accurately determined and required applications identified
		1.2	Specifications are checked for required operating conditions
		1.3	Program instructions are checked for compliance with specifications
		1.4	Software timers are set to specification where required
2	Install automatic process machine control program	2.1	Appropriate program loading technique is selected
		2.2	External loading devices are correctly connected to automatic process machine control systems
		2.3	Machine control system is placed in correct operational mode to accept program loading

		2.4	Program is downloaded in accordance with manufacturer recommended procedures and enterprise requirements
		2.5	Checks are made during and after downloading to ensure accurate and complete data transfer
		2.6	External program loading devices and connections are disconnected from process and machine control system
3	Commission automatic process and machine control program	3.1	Operation of the equipment using the program is observed
		3.2	Outputs are checked and measured for compliance with specifications
		3.3	External inputs are checked for compliance with specifications according to specified procedures
		3.4	Total operation is checked for compliance with specifications where applicable
		3.5	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.

Unit context includes:

- 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 analytical and organisational ability, judgement and problem solving
 - work involves individual and team-related activities in workplaces where the CNC equipment is either new or being substantially upgraded
 - work is performed without other qualified assistance
 - customers are normally internal
- Machines requiring CNC software installation and commission include:**
- individual production/manufacturing or treatment machines
 - processing and machining centres
- Personal protective equipment includes:**
- that prescribed under legislation, regulations and enterprise policies and practices
- Information and procedures include:**
- manufacturer specifications and instructions
 - procedures for installing and commissioning CNC programs
 - organisation work specifications and requirements
 - legislation/regulation/national and industry codes and practices relevant to the installation and commissioning
 - quality and Australian Standards and procedures

Unit Mapping Information

Supersedes and is equivalent to LMFFT4005B Install and commission CNC software.

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for MSFFT4005 Install and commission computer numerically controlled (CNC) software

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Performance Evidence

- Collect, organise and understand information related to multi-trade work instructions and work orders, building and structural plans and safety procedures
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Install and commission CNC software on at least two (2) different machines and:
 - identify requirements of tasks and organise work to achieve goals and results
 - select and install software programs for the CNC equipment
 - select and apply appropriate loading techniques
 - check and adjust machine operations and programming
 - suggest improvements
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- Communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems, interpret basic plans and follow safety procedures
- Use workplace technology related to the coordination, including communication equipment, time and management aids and other measuring devices
- Avoid backtracking, work flow interruptions or wastage
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity

Knowledge Evidence

- Computer science theory relevant to CNC machine operation
- CNC control system characteristics, applications and limitations
- Procedures and techniques for programming CNC equipment
- Operation requirements of equipment and work systems to be programmed

Assessment Conditions

- Assessors must:
 - hold training and assessment competencies as determined by the National Skills Standards Council (NSSC) or its successors
 - have vocational competency in the furnishing industry at least to the level being assessed with broad industry knowledge and experience, usually combined with a relevant industry qualification
 - be familiar with the current skills and knowledge used and have relevant, current experience in the furnishing industry.
- Assessment methods must confirm consistency of performance over time rather than a single assessment event and in a range of workplace relevant contexts.
- Assessment must be by observation of relevant tasks with questioning on underpinning knowledge and, where applicable, multimedia evidence, supervisor's reports, projects and work samples.
- Assessment is to be conducted on single units of competency or in conjunction with other related units of competency. Foundation skills are integral to competent performance in the unit and should not be assessed separately.
- Assessment must occur on the job or in a workplace simulated facility with relevant process, equipment, materials, work instructions and deadlines.
- Access is required to CNC equipment, software and production materials.

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