



Australian Government

MEM09022 Create 2-D code files using computer-aided manufacturing system

Release: 1

MEM09022 Create 2-D code files using computer-aided manufacturing system

Modification History

Release 1. Supersedes and is equivalent to MEM09022A Create 2D code files using computer aided manufacturing system

Application

This unit of competency defines the skills and knowledge required to produce 2-D computer-aided manufacturing (CAM) code files from existing computer-aided design (CAD) model. It includes managing files and tools, and customising installed software.

The unit typically applies in a manufacturing setting where components are machined or processed within a CAM environment.

Where 2-D CAD models are required to be produced unit MEM09009 Create 2-D drawings using computer-aided design system should also be selected.

Where components are machined following development of code files then appropriate computer numerically controlled (CNC) machining units should also be selected.

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

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM09002	Interpret technical drawing
MEM12023	Perform engineering measurements
MEM12024	Perform computations
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information
MEM16008	Interact with computing technology

Competency Field

Drawing, drafting and design

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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|---|---|---|
| 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 Identify job requirements from specifications, job sheets or associated work instructions |
| 2 | Prepare for computer aided manufacture | 2.1 Customise system variables, user interface and software defaults to suit procedures |
| | | 2.2 Develop manufacturing data according to procedures |
| 3 | Manipulate 2-D models | 3.1 Import models using a variety of file formats |
| | | 3.2 Orient and manipulate models using the full capability of the software system |
| | | 3.3 Link model entities to database attributes to suit job requirements |
| | | 3.4 Apply manufacturing data to detailed models to suit various applications and job requirements |
| 4 | Produce output from 2-D model | 4.1 Save files in a variety of formats according to SOPs |
| | | 4.2 Verify CAM model for logical sequencing and correct manufacturing procedures |
| | | 4.3 Produce code from the 2-D CAM model |

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

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.

Customising includes the use of one (1) or more of the following:

- macros
- menus
- default settings

Entities refer to any single item created on the screen and include one (1) or more of the following:

- lines
- arcs
- circles
- text

Attributes are properties associated with an entity and include one (1) or more of the following:

- layer
- level
- line type
- colour
- text

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM09022A Create 2D code files using computer aided manufacturing system

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>