



Australian Government

**MEM23003 Operate and program
computers and/or controllers in engineering
situations**

Release: 1

MEM23003 Operate and program computers and/or controllers in engineering situations

Modification History

Release 1. Supersedes and is equivalent to MEM23003A Operate and program computers and/or controllers in engineering situations.

Application

This unit of competency defines the skills and knowledge required to operate and program computers and/or controllers in industrial situations and to prepare and maintain programs including operating computer and/or controller hardware and software for engineering tasks. It also includes developing or customising computer and/or controller systems or programs.

The unit applies to engineering or related activities and is suitable for people giving technical support in manufacturing or engineering operations and those pursuing technical qualifications and careers at paraprofessional or technician level.

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

Pre-requisite Unit

MEM16008 Interact with computing technology

MEM16006 Organise and communicate information

Competency Field

Engineering science

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Operate a computer and/or controller system	1.1 Operate hardware to complete engineering tasks 1.2 Use appropriate software to produce required outcomes 1.3 Identify and use available sources of help to overcome basic difficulties with applications 1.4 Ensure technical instructions are followed and inconsistencies and technical difficulties investigated and resolved

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Adhere to work health and safety (WHS) regulations and guidelines
2. Develop and customise computer and controller systems or programs	2.1 Prepare work plan for the programming or customising task in accordance with organisational guidelines 2.2 Write, alter and customise programs in the required format and computer language 2.3 Maintain client engagement with project or task 2.4 Maintain program or system records and make available to all interested parties following organisational procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills 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.

Hardware includes one or more of the following:	<ul style="list-style-type: none"> • personal computers • networked systems • personal organisers • communications equipment • programmable logic controller (PLC) and microprocessor controllers • computer controlled machinery and systems.
Computer controller equipment includes:	<ul style="list-style-type: none"> • central processing unit (CPU) • input/output (I/O) • peripherals • interfaces • actuators.
Software includes one or	<ul style="list-style-type: none"> • commercial software applications

more of the following:	<ul style="list-style-type: none"> • computer-aided design (CAD) software • computer-aided manufacturing (CAM) software • organisation specific software • PLC or microprocessor controller software • word processing • spreadsheet • database • graphic • communication packages • presentation packages.
Programming includes one or more of the following:	<ul style="list-style-type: none"> • Visual Basic • ladder logic • flow chart • program customising • spreadsheet programming • writing macros • setting up/varying databases.
Organisational guidelines include one or more of the following:	<ul style="list-style-type: none"> • security procedures • WHS procedures • maintenance procedures.

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet -

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