



Australian Government

MEM12025 Use graphical techniques and perform simple statistical computations

Release: 1

MEM12025 Use graphical techniques and perform simple statistical computations

Modification History

Release 1. Supersedes and is equivalent to MEM12025A Use graphical techniques and perform simple statistical computations

Application

This unit of competency defines the skills and knowledge required to interpret and construct graphs and charts from given or determined data, and perform basic statistical calculations.

Graphs and charts apply to information from various work contexts, quality processes, production and market trends and other engineering applications and a range of devices are used to assist with calculations.

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

Band:

This unit has dual status and is to be regarded as both a Specialisation Band A unit and Specialisation Band B unit for progression to C5 (AQF level V).

Unit Weight: 2

Pre-requisite Unit

MEM12024	Perform computations
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Measurement

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
---	---

1	Determine job	1.1	Follow standard operating procedures (SOPs)
---	----------------------	-----	---

Elements describe the essential outcomes.

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

	requirements	1.2	Comply with work health and safety (WHS) requirements at all times
		1.3	Identify job requirements from specifications, drawings, job sheets or work instructions
2	Read and construct graphs from given or determined data	2.1	Extract complex information from graphical representation
		2.2	Analyse data with respect to emerging trends
		2.3	Construct graphs as required from data and draw with respect to scale and accepted method
		2.4	Interpret significant features of graphical representation
3	Perform basic statistical calculations	3.1	Calculate mean, median and mode from given data
		3.2	Calculate standard deviation
		3.3	Apply application of standard deviation and limits to process improvement techniques

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.

Features of graphical representations include one (1) or more of the	• limit lines
	• gradients (straight line graphs)
	• intercepts

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.

following:

- maximum and minimum values

Graphs include one (1) or more of the following:

- histograms
- control charts
- straight line graphs
- parabolic graphs

Process improvement techniques include the following:

- techniques in which error rates are mathematically calculated and recorded, including three sigma and six sigma

NOTE: This unit gives the underpinning calculation skill for these techniques and does not cover the implementation or use of three or six sigma systems

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM12025A Use graphical techniques and perform simple statistical computations

Links

Companion Volume implementation guides are found in VETNet -

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