



Australian Government

MSS404056 Apply statistics to operational processes

Release: 1

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Modification History

Release 1. Unit code changed. Application changed. Foundation Skills populated. Assessment Requirements changed. Supersedes and is equivalent to MSS404054 Apply statistics to operational processes.

Application

This unit describes the skills and knowledge required to gather and analyse process data to support the control of processes and operations.

This unit applies to team leaders, technical experts, experienced operators or others who are required to interpret data and apply statistical concepts to determine whether monitored processes are in control and to communicate this information to others.

This unit applies to any organisation that is applying statistical process control on processes or operations.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Competency Field

Competitive systems and practices

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Collect process data	1.1 Read and interpret sampling scheme 1.2 Obtain measurements in accordance with standard sampling procedures 1.3 Handle data in accordance with procedures
2. Interpret data	2.1 Plot data on control chart 2.2 Identify random and non-random patterns of results 2.3 Identify results outside the control limits 2.4 Identify situations requiring action 2.5 Take action in accordance with procedures 2.6 Calculate cost of non-conformance

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
3. Calculate control limits	3.1 Consult stakeholders to determine appropriate limits 3.2 Calculate and revise control limits 3.3 Plot limits on control chart and complete all records in accordance with procedures 3.4 Explain impact of limit to stakeholders

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

- Reading skills to interpret process control data
- Writing skills to plot control charts
- Oral communication skills to discuss/explain process control limits with stakeholders
- Numeracy skills to calculate cost factors, interpret data, apply statistical concepts and plot control charts.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSS404054 Apply statistics to operational processes.

Links

Companion Volume Implementation Guides are found in VETNet – -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5b04f318-804f-4dc0-9463-c3fb9a3fe998>

Assessment Requirements for MSS404056 Apply statistics to operational processes

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- collect and interpret process data and apply to control of at least 2 operational processes
- calculate control limits and plot control charts for at least 2 operational processes.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- purpose of sampling and measurement
- sampling methods to be used
- methods of calculating mean and standard deviation and their purpose in statistical control
- concept of limits, including 1, 2, 3 and 6 sigma limits
- types of control charts and their applications to different types of process and product and for different purposes
- process causes of variation and typical cause types of non-random variation
- non-process causes of variation
- stable and unstable processes
- causes of stability and instability in the process
- calculation of control limits and process capability and the applications of different control limits
- standard distribution curve and confidence limits.
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Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources
- modelling of industry operating conditions, including:
 - functioning statistical process control processes and related procedures.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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