



Australian Government

MEM30013 Assist in the preparation of a basic workplace layout

Release: 1

MEM30013 Assist in the preparation of a basic workplace layout

Modification History

Release 1. Supersedes and is equivalent to MEM30013A Assist in the preparation of a basic workplace layout.

Application

This unit of competency defines the skills and knowledge required to assist in the charting and analysis of basic manufacturing operations including assisting in the preparation of workplace layouts. It covers the basic principles of ergonomics and the role of productivity improvements, quality procedures and work flow analysis.

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. All work is carried out under supervision.

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

Pre-requisite Unit

Nil

Competency Field

Engineering technician

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. Identify opportunities for workplace layout improvement	1.1 Undertake basic analysis of workplace data to determine sources of waste 1.2 Obtain future capacity requirement from relevant sources 1.3 Establish productivity improvement areas based on information obtained 1.4 Establish appropriate productivity measures in conjunction with supervisors and other appropriate personnel
2. Develop basic layout	2.1 Develop basic layout options using operation process charts, flow

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
options for workplace improvement	charts, flow process charts, and string diagrams 2.2 Identify and consider information on ergonomics, health and safety hazards 2.3 Develop improvements in consultation with users and supervisors 2.4 Develop simple economic appraisals for proposed improvement 2.5 Refer layout options to an appropriate authority for approval

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.

Waste includes:	• excess production and early production • waiting • materials queuing and not moving • people not working • transporting • double handling • poor process design • inventory • stores • buffers • lot sizes • inefficient performance of a process • reaching, bending and exertion • making defective items requiring rework, rejects and unnecessary inspection.
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Information on ergonomics, health and safety hazards includes:	• standard references including Worksafe Australia guidelines • relevant acts and regulations • information contained in manufacturer manuals • standard operating procedures (SOPs) • workplace reports including: • incident reports • commissioned studies • advice from relevant workplace individuals and committees.
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Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM30013A Assist in the preparation of a basic workplace layout.

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for MEM30013 Assist in the preparation of a basic workplace layout

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include:

- identifying opportunities for workplace layout improvement
- developing basic layout options for workplace improvement on at least two occasions
- developing simple economic appraisals for proposed improvements.

Note: Where a volume and/or frequency is not specified, demonstration must be provided at least once.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- sources of workplace waste related to layout
- sources of information on ergonomics
- workplace layout principles including at a basic level the degree to which workplace layout is affected by:
 - engineering processes and systems
 - materials flow patterns
 - types of production plant and machinery
 - materials handling methods
 - unit loads
 - types of production methods
 - basic principle of ergonomics
- productivity:
 - definition and measures of productivity
 - factors affecting productivity
 - the concept of waste and its application to productivity improvements
 - productivity and quality
 - value adding
- recording techniques:

- flow charts
- activity relationship charts
- outline process charts
- flow process charts
- multipurpose charts
- string diagrams.
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Assessment Conditions

- Assessors must:
 - have vocational competency in assisting in the preparation of a basic workplace layout at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the Standards for Registered Training Organisations 2015 or its replacement and comply with the National Vocational Education and Training Regulator Act 2011, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires.
- Where possible, assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions that cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required including relevant workplace procedures, product and manufacturing specifications.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
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