



Australian Government

MEM30019 Use resource planning software systems in manufacturing

Release: 1

MEM30019 Use resource planning software systems in manufacturing

Modification History

Release 1. Supersedes and is equivalent to MEM30019A Use resource planning software systems in manufacturing.

Application

This unit of competency defines the skills and knowledge required to access and use enterprise resource planning (ERP), material requirements (or resource) planning (MRP) software systems that are used in conjunction with just-in-time (JIT) techniques. Systems provide information to support production operations such as master production schedules, materials requirement plans, capacity requirement plans, bills of material, inventory control and statistics, order actions and schedules.

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

MEM13015 Work safely and effectively in manufacturing and engineering

MEM16006 Organise and communicate information

MEM16008 Interact with computing technology

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. Use software interface	1.1 Follow standard operating procedures (SOPs) and comply with work health and safety (WHS) requirements at all times 1.2 Use hardware peripherals appropriately to access system

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Navigate the system and the screens using software features 1.4 Acknowledge messages in accordance with procedures 1.5 Process information in the required format
2. Access information	2.1 Obtain relevant data and information from the system 2.2 Identify the status of items in the system 2.3 Access historical data and information 2.4 Interpret information and prioritise actions
3. Take appropriate actions	3.1 Take actions in response to resource planning information in regard to production schedules, materials management, purchasing and ordering and transport and logistics 3.2 Conduct required follow-up to ensure anticipated results have occurred 3.3 Record adjustments and variations in accordance with 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.

Software systems include:	- Enterprise resource planning (ERP) - Material requirements (or resource) planning MRP - similar software programs.
Appropriate actions needed as a result of information obtained from resource planning software	- production schedules - materials management - purchasing and ordering - transport and logistics.

include:	
Resource planning information includes:	• information from ERP, MRP or similar systems that provide information on: • master production schedule • materials requirement plan • capacity requirement plan • bills of material • inventory control and statistics • order action • schedules.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM30019A Use resource planning software systems in manufacturing.

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 MEM30019 Use resource planning software systems in manufacturing

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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:

- operating the computer hardware
- using enterprise resource planning (ERP) planning software systems on at least two occasions
- using material requirements (or resource) planning (MRP) planning software systems on at least two occasions
- interpreting the data and other information produced by the software systems on at least two occasions
- prioritising actions resulting from the information received.

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:

- expertise needed to operate process
- hierarchy of ERP, MRP systems and operation
- information available from, and business activities exercised by or through ERP and MRP systems
- closed loop manufacturing system basics
- business planning including demand and resources
- master production scheduling (MPS)
- material requirements planning (MRP)
- capacity requirement planning (CRP)
- system inputs:
 - bills of material
 - need for accuracy
 - inventory statistics
 - planning data

- introduction to capacity management
- production activity control
- system outputs:
 - planned orders
 - order action
 - firm/tentative
- just in time (JIT):
 - techniques
 - production smoothing
 - single unit flow
 - Kanban
 - set-up time reduction including single-minute exchange of die (SMED)
 - lead time reduction
- production control methods:
 - types
 - master schedules
 - control by exception
 - computer control
 - visual control
 - combination MRP2 and Kanban system
 - shop floor including day-to-day and Kanban
- scheduling:
 - techniques
 - order release
 - policies
 - centralised
 - decentralised
- inventory control:
 - raw
 - work-in-process
 - finished goods
 - lean manufacture and inventory
 - inventory costs
 - procurement
 - material control techniques
 - ABC (Pareto) analysis
 - economic order quantity (EOQ)
 - min-max systems
 - Kanban and just in time
 - cycle counting.

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Assessment Conditions

- Assessors must:
 - have vocational competency in using resource planning software systems in manufacturing 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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