



Australian Government

**MEM234039 Provide technical support for
prototyping in large engineering and
fabrication projects**

Release: 1

MEM234039 Provide technical support for prototyping in large engineering and fabrication projects

Modification History

Release 1. New unit.

Application

This unit of competency defines the skills and knowledge required to provide technical support during the prototyping stage of large engineering projects. The scope of the technical support during prototyping may include contributing to supervising the prototyping of processes and designs, contributing to the design of modifications, scheduling calculations and testing, supervising other employees, and acting as a technical support person in multidisciplinary teams.

This unit does not cover integration of spatial scans and models with configuration management procedures. Where this skill is required, unit MEM234036 Apply configuration management procedures in engineering project management and its prerequisites should be selected.

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

Pre-requisite Unit

Nil

Competency Field

Engineering Science

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. Review prototyping schedule requirements	1.1 Review prototyping schedule for timelines, milestones, and inter-relationships between prototyping activities 1.2 Identify area allocations for prototyping activities and flow of work 1.3 Identify own area of responsibility in terms of process, area, prototyping objectives and work team 1.4 Develop a schedule for own and team prototyping responsibilities

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
2. Provide systems technical support to prototyping team	2.1 Identify features and controls for project enterprise resource planning (ERP) system 2.2 Interpret design and scheduling information for other employees 2.3 Provide support to employees interacting with the ERP system and other IT systems during prototyping 2.4 Ensure data related to required prototyping activities is correctly captured and entered into ERP and other systems
3. Monitor materials used during area or team prototyping activities	3.1 Check received materials meet design and prototyping schedule specifications 3.2 Ensure data related to material faults and other non-conformances is captured and reported 3.3 Assist in identifying root cause of non-conformances 3.4 Assess performance of materials during prototyping and suggest specification variations where appropriate 3.5 Participate in capability studies of suppliers during prototyping
4. Monitor and support prototyping work processes	4.1 Review allocated prototyping activities for suitability to area allocation and schedule 4.2 Calculate materials, required employee hours, machines and machine hours for allocated prototyping work processes 4.3 Ensure calculations are consistent with broader prototyping plan and schedule 4.4 Monitor prototyping work against allocated hours 4.5 Monitor workflow and transfer operations and report any space or area conflicts or bottlenecks 4.6 Identify any design, process and scheduling changes for later engineering and/or fabrication stages

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.

Area allocation (called layout for some projects) refers to the location in three dimensions for prototyping activities in either a workshop or exterior yard on the engineering and/or fabrication project site for one or more of the following functions:

- assembly area
- welding and fabrication
- electrical and other services
- materials receiving
- stores
- cranes and other materials handling equipment
- administration
- employee facilities
- other facilities not mentioned above depending on the stage of construction.

Unit Mapping Information

No equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

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