



Australian Government

Assessment Requirements for MEM234040 Plan space allocation for large steel based fabrication and construction projects

Release: 1

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Modification History

Release 1. New unit.

Performance Evidence

There must be evidence the candidate has demonstrated the ability to:

- access a site correctly
- operate spatial and scanning software correctly including:
 - selecting scanning parameters
 - measuring objects digitally
 - merging or importing separate scans
 - importing and exporting data from other programs
 - saving scans and determining access
 - establishing and maintaining a scan library
- perform a visual inspection of a site and workshop to determine best approach for scanning
- scan a site using spatial scanning software including workshops, yard and existing fixed machinery and equipment and develop a 3D model
- locate items accurately in space in a 3D site model
- determine visualisation mode
- produce detailed 3D model for prototyping stage including areas for:
 - fabrication
 - assembly and erection
 - storage
 - support services
- take into account for area allocations:
 - electrical supply and distribution
 - mechanical considerations
 - lifting and handling capacity in workshop and yard
 - access and visibility considerations
 - environmental considerations
 - maintainability and expandability of allocated areas as a fabrication stage progresses
- evaluate spatial logistics requirements for prototyping and future fabrication stages.

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

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- safe work practices and procedures
- spatial software features and controls
- software and organisational procedures for:
 - creating and manipulating entities in 3D space
 - modifying existing 3D files and models
 - saving files
 - extracting data with respect to the physical properties of models created in 3D space
- difference between single construction and modular construction for large fabrication projects
- the function of a fabrication site including workshops and yard space as both a resource and constraint in large fabrication projects:
- relationship of the prototyping stage to initial design and later fabrication stages, including prototyping as a trial of:
 - design
 - use of physical space
 - materials
 - work and material flow
- common fabrication and assembly operations used in large fabrication projects.
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Assessment Conditions

- Assessors must:
 - have vocational competency in space allocation for large steel-based fabrication and construction projects 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.
- There must be suitable access to an operating plant or equipment that allows for appropriate and realistic simulation and documentation including relevant workplace procedures, industry codes and standards.
- 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.

Links

Companion Volume Implementation Guides are found in VETNet -

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