



Australian Government

Assessment Requirements for MEM234001 Plan and manage engineering-related projects or operations

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM234001A Plan and manage engineering-related projects or operations.

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, planning and establishing engineering and organisation requirements for the project or operation
- establishing resources required, including labour, materials, equipment within budgets and procedures on at least two occasions
- investigating and validating performance analysis, modelling and simulation software
- commencing project or operation management on at least two occasions including establishing support team and responsibilities
- overcoming constraints and contingencies to achieve schedules and budgets as contained in business plan
- undertaking appropriate internal and external reporting
- managing continuous improvement.

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:

- types of situations where engineering-related projects or operations require high level para-professional engineering skills
- personal authorities and priorities for projects or operations
- appropriate technical and professional assistance
- current options and trends in performance analysis, project and financial modelling, engineering-related modelling and simulation software, including underpinning program and software validation techniques
- budget and control measurement and analysis techniques for project or operations management
- project plan and schedule from project design activities
- physical resource availability for project or operations
- human resource and skills availability for engineering-related projects

- accountability considerations including:
 - audit
 - recording and implementation requirements for projects or operations incorporating tenders
 - contracts
 - schedules
 - budgets
 - personnel and resource allocations
 - financial management procedures
 - standard operating procedures (SOPs)
 - maintenance procedures
- technical documentation management including:
 - graphics and specifications
 - records of meetings
 - communications
 - negotiations
 - decisions and agreements with stakeholders
- sources of information and resources including:
 - professional services
 - finance
 - accounts
 - taxation
 - legal
 - insurance
 - human resources (HR)
 - trade and industry contacts
- contemporary contingency and constraints management approaches
- implications for engineering projects or operations associated with typical financial planning and accounting processes that may relate to an engineering project or operation incorporating:
 - capital flow and liquidity
 - assets and liabilities
 - depreciation
 - balance sheet
 - costing
 - budgeting and cost control
 - break-even analysis
 - profit and loss
 - capital investment and return on investment
 - financial recordkeeping procedures for expenditures

- typical legal requirements for engineering-related projects or operations
- WHS requirements, codes of practice, regulations, standards and regulatory requirements for project or operations
- risk management and reduction, current safe work method statements (SWMS), safety data sheets (SDS) and work permits
- professional and ethical practice
- tendering and contracts requirements and processes including agreement on design and specification, negotiations and optimisations, and provisions for variations, delays and penalties
- work organisation and management theory
- conflict resolution, problem-solving and decision-making.

Assessment Conditions

- Assessors must:
 - have vocational competency in planning and managing engineering-related projects or operations 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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Links

Companion Volume Implementation Guides are available on VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>