



Australian Government

MEM22012 Coordinate resources for an engineering project or operation

Release: 1

MEM22012 Coordinate resources for an engineering project or operation

Modification History

Release 1. Supersedes and is equivalent to MEM22012A Coordinate resources for an engineering project or operation.

Application

This unit of competency defines the skills and knowledge to coordinate resources in accordance with operations or project plans and budgets formulated to meet business goals and strategic objectives. It applies to engineering projects or operations that have a significant engineering component at an engineering technician level.

Individuals completing this work either already have or are developing skills and experience in mathematics, computer packages and file handling, engineering plant, facilities and services, materials, methods and processes.

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

Pre-requisite Unit

MEM16006 Organise and communicate information

Competency Field

Management and organisation

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. Contribute to planning and budgeting	1.1 Follow standard operating procedures (SOPs) 1.2 Comply with work health and safety (WHS) requirements at all times 1.3 Contribute to policy and procedures development 1.4 Review sustainability implications of resources 1.5 Contribute to planning for operations or project resourcing in the context of operations, project, strategic and business plans 1.6 Contribute to development of performance indicators or parameters,

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	monitoring and continuous improvement processes 1.7 Contribute to the development of resources information distribution and control systems, including the use of software systems
2. Evaluate supply chain relations	2.1 Identify supply value chain members and contribution to project or operation 2.2 Assess supply agreements, quality and delivery parameters against performance indicators 2.3 Undertake analysis of product or customer service costs 2.4 Assess tender and contract documents and identify risk factors 2.5 Assess supply chain communications for feedback on quality, supply chain efficiency and continuous improvement processes
3. Coordinate physical resources	3.1 Assess physical resource requirements and develop a resources distribution schedule consistent with the budget 3.2 Coordinate efficient utilisation of physical resources 3.3 Ensure compliance with WHS, regulatory and risk management requirements
4. Contribute to human resources management	4.1 Assess timetable and project or operational requirements to identify labour and skills requirements 4.2 Program and communicate labour and skills to satisfy technical and budget requirements 4.3 Organise labour and skill schedules to facilitate training 4.4 Contribute to skills development and training arrangements
5. Contribute to budget development and control	5.1 Contribute to the development of budgets in the context of business and strategic operations or project plans 5.2 Control delegated expenditure and cash flow in accordance with budget 5.3 Record resources utilisation and costs, including those for maintenance of assets
6. Supervise and review resources delivery	6.1 Apply systems thinking, constraints and contingency management, and continuous improvement techniques 6.2 Monitor and review supply chain and coordinate continuous improvements 6.3 Monitor physical and human resources and performance indicators

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	and co-ordinate continuous improvement processes 6.4 Monitor budget and co-ordinate response to threats 6.5 Monitor sustainability and coordinate responses in accordance with sustainability policy and procedures 6.6 Monitor information and resources control system and implement continuous improvement 6.7 Use features and capabilities of software packages for resources management
7. Report and document resources coordination	7.1 Report in accordance with procedures 7.2 Maintain documentation 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.

Work health and safety (WHS), regulatory requirements and enterprise procedures include:	• WHS acts, regulations and relevant standards • codes of practice from Australian and overseas engineering and technical associations and societies • risk assessments • registration requirements • safe work practices • state and territory regulatory requirements.
Software packages include one or more of the following:	• spreadsheets • databases • word processor • presentation • project management

	• cost control • system control and data acquisition (SCADA) • Manufacturing Resource Planning (MRP) • Enterprise Resource Planning (ERP).
Continuous improvement includes one or more of the following techniques:	• balanced scorecard • current and future state mapping • measuring performance against benchmarks • process improvement, problem-solving and decision-making • data management, generation, recording, analysing, storing and use of software • training for improvement systems participation • technical training.
Constraints and contingencies include:	• financial, organisational, procedural or cultural constraints • physical constraints including limits to resources, site access or logistical limitations.
Sustainability includes:	• meeting all regulatory requirements • conforming to all industry covenants, protocols and best practice guides • minimising ecological and environmental footprint of process, plant and product • maximising economic benefit of process plant and product to the organisation and the community • minimising the negative WHS impact on employees, community and customer.

Unit Mapping Information

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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 MEM22012 Coordinate resources for an engineering project or operation

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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:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- evaluating supply chain, quality, delivery, capability, tender and contracting processes and documents
- coordinating and controlling physical and human resources and resource budgets on at least two occasions
- monitoring, reviewing and improving resources delivery
- resource planning in the context of operations, project, strategic and business plans on at least two occasions
- reporting and documenting objectives, key performance indicators, timetables and progress.

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:

- safe work practices and procedures
- typical sustainability implications for engineering projects or operations
- systems thinking, constraints and contingency management, and continuous improvement techniques
- procedures for preparing and monitoring project plans, business plans and budgets
- cost planning, cost-benefit analysis, life cycle costing, valuation and cost estimation procedures
- procedures for assessing implications of design on project implementation costs or manufacturability of product and maintainability of plant and process
- resources information distribution and control systems, including the use of enterprise resource planning (ERP) and materials resource planning (MRP) software
- planning and cost control software

- supply and value chain evaluation techniques, including contract, quality and delivery parameters
- engineering-related operating procedures associated with the use of resources
- financial impact of a variety of maintenance strategies on overall costs on typical tenders, contracts and law of contract provisions, relevant to engineering projects or operations
- how to calculate quantities from drawings, specifications and contracts
- work health and safety (WHS) requirements including acts and regulations
- resources expenditure and cash flow control procedures
- procedures and requirements for financial records, including records of resources and costs for maintenance of assets
- continuous improvement processes and procedures
- typical constraints for engineering projects or operations
- sustainability considerations.
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Assessment Conditions

- Assessors must:
 - have vocational competency in coordinating resources for an engineering project or operation 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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